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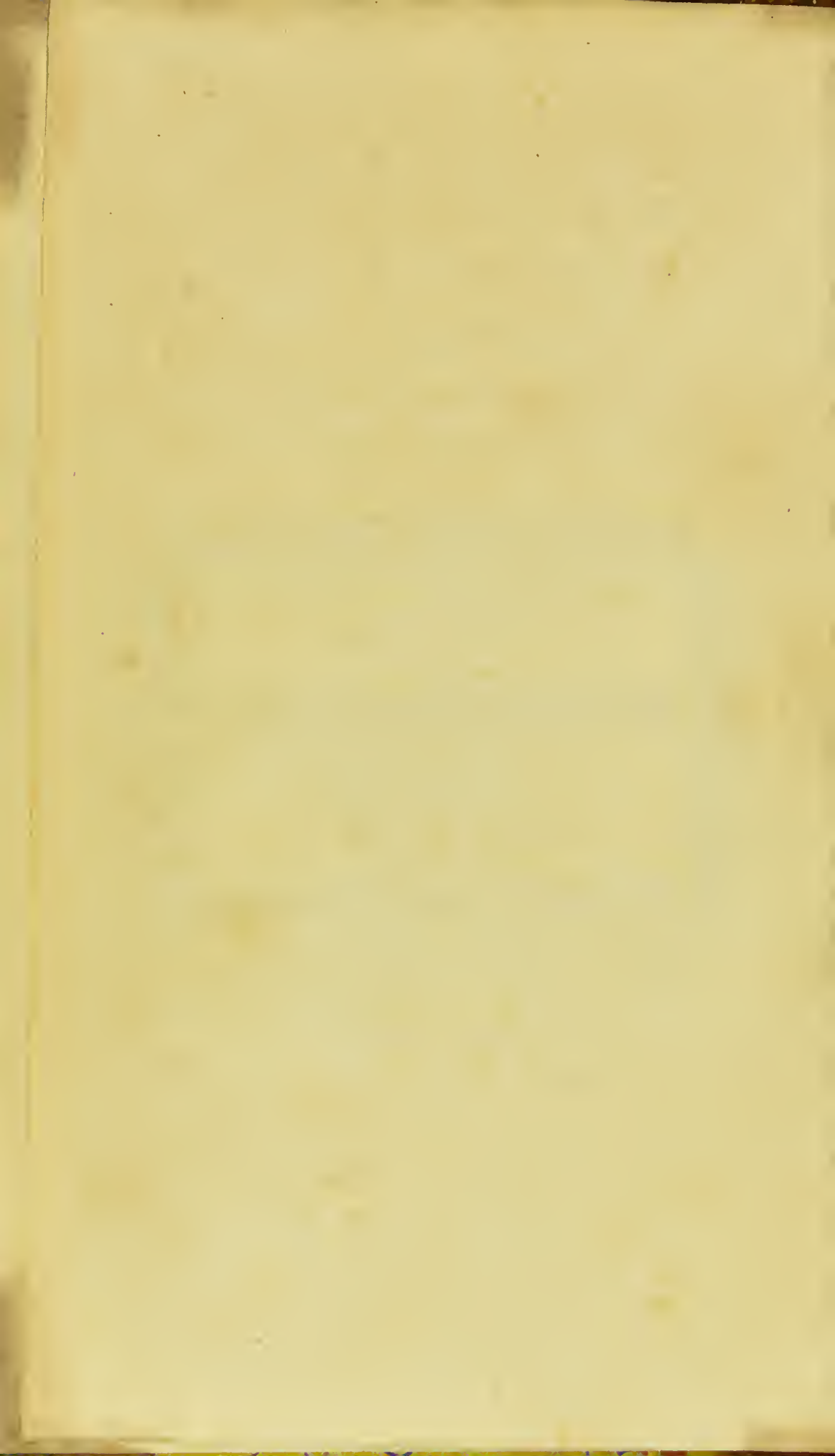
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OBSERVATIONS

ON

FEVER,

ARISING FROM

HUMAN EFFLUVIA,

IN JAILS, HOSPITALS, SHIPS, AND OTHER
CONFINED SITUATIONS;

IN EUROPE AND AMERICA,

FROM 1775 TO 1806.

By ROBERT ROBERTSON, M.D. F.R.S. F.A.S.

MEMBER OF THE ROYAL COLLEGE OF PHYSICIANS; AND PHYSICIAN
TO THE ROYAL HOSPITAL, GREENWICH.

Opiniorum commenta dalet dies, experientiæ judicia confirmat.

IN FOUR VOLUMES.

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1807.

OR-REVIEWS

1844

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METEOROLOGICO-MEDICAL OBSERVATIONS

MADE IN
ENGLAND AND NORTH AMERICA;

AND MORE PARTICULARLY ON

FEVER

ARISING IN JAILS, HOSPITALS, SHIPS, &c.

FROM THE YEAR 1775 UNTIL THE END OF 1790.

PART I.

A SYNOPSIS

OF MEDICAL AND METEOROLOGICAL OBSERVATIONS IN ENGLAND AND VARIOUS PARTS OF NORTH AMERICA, FROM SEPT. 1775, UNTIL THE END OF JULY 1778.

CHAPTER I.

Preliminary Discourse.

HAVING in the first volume stated the various appearances of fever which proceeds from marsh miasmata or Marsh vapor, as they occur in hot climates;

The unsuccessful as well as the successful method of treating the fever; and

The method by which the author prevented sea-

men and others from being infected with the baneful effluvia, when they were necessarily employed on shore duty, and exposed to that effluvia :

I am now to state the various appearances of fever which proceeds from human effluvia, or the infectious aura, or gas, in jails, hospitals, ships, or other contagious situations, as these appearances occur, whether in hot or in cold climates ;

The unsuccessful as well as the successful method of managing the fever ;

The methods which were pursued with success by the author to prevent as well as to subdue infection ; and also

The most remarkable symptoms which discriminate between remittent fevers and infectious fevers*. Which symptoms of discrimination, when duly attended to, like different shades of the same colour, will be found to be only modifications of the same idiopathic disease†.

I have likewise stated in this volume, observations of importance concerning other diseases which occurred to the author in various regions, both on board and on shore, for fifteen years.

The Meteorological Observations on board the *Juno* show how far the weather can possibly be considered to have been the predisposing or immediate

* Here the author expresses himself in compliance with custom.

† I shall have occasion to speak more fully on this subject in the next volume.

exciting cause of the fever. One remark concerning the weather I have made, and it will appear obvious to the reader hereafter, that the virulence of the infection is generally, if not always, in a ratio with the confined situation of the sick; and that to this circumstance it is owing, that fever which proceeds from animal effluvia is more virulent and difficult to cure in winter than in summer.

The Pathological Tables, compose a chronological statement of the sick on board different ships; and

The Comparative Tables, in stating the success which attended different methods of treatment, comprehend all the demonstration that the practical part of the science of medicine admits to decide what method is most preferable.

On board the *Juno*, employed in America in 1776, 1777, and 1778; and on board the *Edgar*, employed at Gibraltar and on Channel service in 1779, 1780, 1781, and 1782, I was enabled to ascertain how very inadequate the income then allowed by the establishment to naval surgeons was to the exigencies of the sick, especially on board of sickly ships. At the same time I was enabled to demonstrate that for political reasons it was absolutely necessary that the indigent establishment of naval surgeons should be improved*.

I was

* Not for their sakes but for the purposes of the public service. To justify government for increasing the expenditure of

I was also enabled on board the Edgar to prove that Peruvian bark, when administered early in ship fever, was superior to any other medicines in curing it; and this I afterwards confirmed more fully on board the Romney, Blenheim, and Salisbury, as well as in my shore practice, and in this hospital * since.

The few cases which failed under this treatment on board the Edgar and Romney, are carefully related with apposite remarks.

The observations in Part V. during my stay and practice in Hythe, contain much useful information. A sketch of the country is stated previous to a synopsis of the diseases which occurred to my observation in eight years, and of my treatment of these diseases.

Though my remarks on board the Salisbury are brief, they contain an additional confirmation of the efficacy of my manner of treating fever on shore as well as on board, in different situations.

The subduing and prevention of infection are objects so important as to merit the attention of general society; but more especially of those who are in authority; as well as of those who act immediately under them by land or by sea.

the public treasure, there must be demonstrated a political necessity; and when that is done the expence is no longer an object of any consequence.

* Greenwich.

To

To commanding officers and their inferiors, indeed, the most powerful argument that can be advanced to induce them to render surgeons every possible assistance in the care of the sick, and the prevention of diseases, is, that unless men are healthy they can never be in a condition to be employed on any service of importance; and to remind them, that of every important service performed by the men, whether in the navy or the army, the honour and advantage chiefly redound to the officers*.

Another consideration why officers ought readily to assist the surgeons is, that the latter, as government now defrays the greater part of the expence for medicines in the navy †, can have no other motive in applying for assistance than that they may be enabled to return men sooner to their duty; and to keep the ship in a healthy state. Formerly, the narrow-minded might have imputed sinister motives to surgeons for making such applications, which at present cannot be imputed to them.

Could the author have arranged the matter contained in this and the preceding volume, with as much ability and address as he has done it with fidelity, few medical productions would have been sought after or read with more avidity, both on ac-

* I was fortunate in sailing, during the American war and since, with officers who were always ready to render me every assistance I required.

† Ever since 1796.

count of the extent of the plan, and of the utility of the work *. The author, however, trusts, that such as the work is, it will be received with kindness by the learned, and be perused with candor and liberality by medical men in general.

* Another instance of medical observations providentially carried on with but few and short interruptions for a series of upwards of 31 years, by the same person, in three different quarters of the world, is not known to the author.

CHAPTER II.

Observations on board the Deal Castle and Fox.

ABOUT the 9th of September 1775, I was appointed to the Deal Castle of twenty guns, with a complement of 120 men, fitting at Sheerness; and continued on board that ship until the 15th December following. I was then appointed to the Fox of twenty-eight guns, with 160 men, and remained on board that ship until the 22d January 1776, when I was appointed to the Juno of 32 guns and 200 men. Both these ships were fitting out in Portsmouth harbour, and for the greater part of that time not fully manned, so that we had but few sick, and they were sent occasionally to Haslar hospital.

The patients on board the Deal Castle, during the time above mentioned, were eight with fever, of which several were cases of relapse; fifteen with catarrhus complaints, or influenza; three with head-ach; one with debility; one with varicella; two with cough; one with hæmoptysis; one with bowel complaints; three with strain; one with concussion; four with contusion; one with inflammation; one with abscess; one with scald; three with wound; and one with hæmorrhoids; in all 48; of

whom three with intermittent fever, and the man with concussion were sent to sick quarters.

It is remarkable that the most obstinate case of the eight fever patients, was that of a man who had been bled; and that this became one of the cases of relapse. That the situation about Sheerness is favourable to the production of fewer of the remittent and intermittent types, is well known; and therefore needs not to be described.

Emetics; aperients; antimonials; camphire; blisters; and the Peruvian bark were the medicines I prescribed for the fever patients.

Catarrh, or influenza was epidemic this fall throughout the kingdom. The symptoms amongst the men were coryza; head-ach; cough; universal pains and foreness, especially about the thorax; with febricula, and thirst.

By keeping the body moderately warm; by administering aperients; and antimonials with tepid beverage, the patients soon recovered.

The patient who was ill of hæmoptysis recovered in a little time by blood-letting, purging, and an opiate. He had but one paroxysm.

The cases of head-ach were influenza in a slight degree, and therefore required no particular treatment.

All the other patients were managed in a manner suitable to their several cases, which were not marked by any singularity.

Respecting

Respecting the few patients who complained on board the Fox, they were, as I have already mentioned, sent to Haslar hospital ; the ship not being in any condition, while fitting out with great dispatch, to keep sick men on board.

CHAPTER III.

The Monthly Review of the Juno's Sick List, from the 4th of April until the 31st of August 1776, with meteorological remarks.

WHEN we sailed on the 4th of April from St. Helen's, for Quebec, the patients on the sick list were, one with fever; one with eruption; one with itch; one with inflammation; and three with foul ulcer.

The wind varied much and often, though generally between the Northward and Eastward, until the 12th, when it got round to ESE. From thence it veered to the SW. On the 15th it was from South to East; on the 16th, from NEbN to NNW, varying to NbE, till the 20th, when it came to SW, and varied between that and NbE, until the 17th. It now varied from ENE to SSE on the 28th, and afterwards got back to the NNW, still varying. On the 8th, 9th, 15th, 16th, 25th, it blew gales; the 19th, and 20th, it was sometimes calm. The 11th, 12th, 15th, 17th, 21st, 22d, 23d, 24th, 28th, light showers; the 25th, showers. The atmosphere was generally cloudy, sometimes clear, but seldom foggy, except when we crossed the banks of Newfoundland.

The

The moon was full the day we failed, and changed the 18th. The mean height of the thermometer was about 57.

The sick list did not vary much, but rather increased regularly until the 23d; decreased until the 27th; then again increased; and at last decreased to the end of the month. The patients were, thirty with fever; two with scurvy; one with rheumatism; one with gout; two with hectic fever; one with cough; one with hæmorrhoids; one with eruption; four with itch; one with scald; two with strain; three with contusion; one with fracture; three with inflammation; one with swelling of the knee; two with abscess; one with excoriation; and five with ulcer:—in all, 62, including those who were on the list the day we failed.

I sent three fever patients to the hospital in the month of March. Amongst the fever patients are included those complaints which are vulgarly called colds, accompanied with febrile symptoms; though a number of those cases were slight and easily carried off, they were not to be neglected; and are therefore so classed to avoid multiplying diseases, or columns in the general table. This remark applies to all such cases until the month of September. But in the month of August I shall take notice of such as had severer attacks of fever, the symptoms which accompanied it, and the manner

ner in which it was treated. Of other diseases, *it is not my intention to treat fully.*

MAY.

The wind was as variable as in the preceding month, but much more Westerly, and always moderate, except on the 10th when we had gales. On the 1st, 2d, 14th, 18th, 19th, 20th, 22d, and 28th, it was at times calm. We had heavy dews the 1st and 2d; 4th and 5th, light showers with snow; 7th, 18th, snow; 8th, 11th, 12th, 15th, 16th, 23d, and 25th, light showers; 9th, 21st, showers. The atmosphere was often very foggy, and wet every thing, particularly in the beginning of the month. Sometimes it was very hazy, at others cloudy, and seldom clear.—The moon was full the 3d, and changed the 17th. The mean height of the thermometer was about 47 deg. It was often very cold in the river St. Laurence.

The number of sick first increased, then decreased; but varied little until the 12th, when it increased, and rather continued doing so until the middle of the month; then decreased to the 20th. From that time it varied very little until the 27th, when it decreased; and altered very little from the 28th to the end.—On the 8th grog was begun to be served.—At the end of the month we arrived at Quebec.

The

The patients added to the sick list in this month were, forty with fever; one with quinsy; one with plethora; one with dysentery; three with belly-ach; one with singultus; one with deafness; one with nephritis; one with hæmorrhoids; two with eruption; one with itch; seven with contusion; one with wound; two with inflammation; one with swelling of the knee; and eight with abscess:—in all, 73.

On the 24th a boy died of fever, which proceeded from fracturing the neck of the os femoris, which brought on tetanus, or locked jaw. The day before he died, I was informed, he had hurt himself at play before he was taken ill. When he first complained, although he had pain about the superior and interior part of the thigh, he firmly denied that he had received any hurt; I therefore dropt the idea which first struck me that he was hurt, until tetanus came on.

Nothing further material happened in the course of the month.

JUNE.

The 5th and 6th the wind varied; as it did also on the 12th, 17th, 19th, and 20th; but was then chiefly SW. Otherwise it was NE, or ENE. Then it came SW, or westerly with calms, until the 25th, and from that time varied until the end of the month; and all along, excepting the gales
on

on the 13th and 14th, it was light airs or fresh breezes. The 1st and 4th, light showers; 6th showers with thunder; 9th, 13th, 14th, 16th, 17th, 18th, 19th, 24th, 26th, and 28th light showers, with thunder and lightning; 20th, light showers, with hail, thunder and lightning; 22d, showers, hail, thunder and lightning; 23d, showers, thunder and lightning. The atmosphere was often clear, especially in the beginning, but was more generally cloudy throughout the month. The moon was full the 3d, and changed the 16th.

Excepting the first day, the sick list rather decreased until the 8th; when the following patients were sent to the hospital:—One with fever, a weak man; one with scurvy; one with gout; two with cough; one with epilepsy; one with eruption; and three with ulcers. It then increased until the 12th; decreased until the 15th; increased until the 18th; varied little until the 27th; and again decreased.

The cases which occurred this month were, sixteen of fever; one of pleurisy; five of dysentery; two of scurvy; one of rheumatism; two of gout; one of hæmorrhage; two of cough; one of epilepsy; one of itch; one of rupture; eight of confusion; and one of excoriation:—42 in all.

The ship's company were served fresh beef on Saturdays and Sundays; and spruce beer after the 8th.—The hospital was a shocking house, situated

ated under a very high hill, close to the river on the Point Levi side. Before we arrived, the seamen were received into the general army hospital.—On the 24th, the pleuritic patient was sent to the hospital in a convalescent state; and seven of them who were sent on the 8th, returned on board. On the 25th I applied to have them invalided. Two patients, whom I suspected to have been infected with small-pox, were sent as fever cases to the hospital. One of them was ill several days of symptoms which precede variola, after he had seen at the hospital a small-pox patient who died of them afterwards. They are, however, classed as fever patients because of the uncertainty of their disease, and the necessity of sending them immediately out of the ship in case it should have turned out to be small-pox.—Thirteen in all were sent to the hospital.

On the 8th the patient died of singultus*.

Every thing at market was very dear. Scarcely any sort of vegetables could be had.

JULY.

Excepting the 2d and 16th, when it was ENE, the wind varied backwards and forwards from SbW round to NW until the 18th, with moderate gales; from the 9th to the 16th calms a.m. It then got round to the NE till the 21st, when it varied, and

* The man was quite emaciated when he died.

was calm part of the day. It again came to SW, blowing moderately with little variation until the 29th; a. m. commonly calm, after which it was variable. 1st, light showers, thunder and lightning; 2d, ditto lightning; 4th, 11th, 12th, showers, thunder and lightning; 5th, 17th, 22d, 24th, 28th, 31st, light showers; 7th, lightning; 9th, 16th, showers; 21st, light showers, thunder; 29th, hard showers. The atmosphere was cloudy and clear alternately; but not quite regularly so every other day. Full moon the 1st; new the 15th; and full again the 30th. The mean height of the thermometer was about 66 deg.—It was lower in the city at noon, than in the lower town, or on board of our ship.

The sick list varied little, but increased towards the middle of the month; from which time it decreased until the 26th, when it increased; decreased for two days; and then increased to the end.

The patients who complained this month were, seven of fever; one of dysentery; one of belly-ach; three of scurvy; two of rheumatism; one of sore throat; four of cough; one of epilepsy; one of strain; five of contusion; one of fracture; one of wound; one of inflammation; two of abscess; and one of ulcer:—32 in all. So that as the weather became mild and warm, the sick list decreased; which will be more attended to next month.

We

We sent some marines on board a transport to guard prisoners. Every thing on shore at market, except vegetables, which were still scarce, became much cheaper. The scurvy had hitherto been the most prevalent disease in the hospital since it was established. The Triton sent a number of scorbutic patients on shore. The men got spirits to buy at the Brunswick camp, which was on the top of the hill, and were irregular. Very few were seized with small-pox ashore. I sent two scorbutic patients to the hospital; one with small-pox; and one with fever.—Towards the end of the month, the Pearl returned from a cruize in the Gulph; with many of the people scorbutic: they had blowing foggy weather during the cruize. We were now served fresh beef three times a week.

The Brunswick troops on shore had a very mortal fever among them; of which I received the following short account from the surgeon-general to the garrison:—

“ That the sick were generally bad three days when brought to the hospital, in a state of delirium; with black chapt tongues; their teeth covered with fordes; and their bodies with petechiæ accompanied with purging; and that they generally died within 48 hours after their admission. He observed no remission of the fever, though their pulses never indicated violent fever, nor even danger; but all who were so ill at their admission as not to be able to put out their tongues to show them when desired, in-

variably died. That as soon as they were admitted, he ordered them to be well washed in warm water and vinegar, and the bark to be given to them freely, with Port wine." To which account he added, upon my enquiry if he had made use of blisters, by saying, "That he did not approve of them in fevers accompanied with petechiæ; but that he perhaps might have applied them, had the patients been brought to the hospital when first taken ill."

AUGUST.

The 1st and 2d the wind was variable, but easterly. From the 3d to the 8th, it was between WSW and SW, varying a great deal; but still more from the 8th to the 11th, when it came to the Eastward, and continued so until the 14th. It then veered back to the SW, continued so until the 26th, varying little the last six or seven days. Now it veered from WNW to ENE, and continued there, with little variation, until the last day of the month, when it got to WSW.—All the month was moderate, and on the 2d, 14th, 15th, 21st, 30th, and 31st, at times calm; 2d, 3d, light showers, thunder and lightning; 7th, 8th, 9th, 13th, 25th, light showers; 16th, 21st, showers, thunder and lightning. Until the 21st, the atmosphere was very seldom otherwise than clear; but the 18th was foggy and hazy; from that time until the end, it was almost cloudy or hazy; 26th and 28th, sometimes foggy. The moon changed the 14th, and was full the 29th. The mean height of the thermometer

mometer was 65 deg. But it is to be observed, that we left Quebec the 23d, and that the thermometer became gradually lower as we got down the river, so that in eight days it was 9 deg. lower than it was the day we left Quebec: it continued lower while we were at Bique-island.

On the 5th, one of the marines that were on board the transport for scurvy; one man with fever; and one with cough, were sent to the hospital the 13th. The list decreased until the 16th, when it increased; varied for two days, and decreased on the 19th; then continued without alteration until 23d when our four men came from the hospital: after which it varied until the end, rather increasing.

On the 13th, two of our men were invalided. For some time before we left Quebec, we were served fresh beef every meat-day. The 26th we arrived at Bique-island, where our men were employed to cut wood for the ship's use, and sailed from thence on the 31st.

The patients added to the list were, three with fever; one with head-ach; nine with dysenteric complaints; two with belly-ach; one with scurvy; one with rheumatism; one consumptive or hectic patient; two with sore throat; three with cough; one with deafness; one with giddiness; one with eruption; one with strain; one with contusion; three with wound; one with inflammation; one with abscess; and one with furuncle:—in all 34.

CHAPTER IV.

Observations on the Fever of the preceding Months.

A PERIOD now commences in which a very important change of the health of the ship's company began to appear; but before I begin to this period, it may not be improper first to enumerate the symptoms of the fever which hitherto affected the people, that they may be compared with those which occurred in the ensuing months. However, I do not intend to draw the comparison to minuteness, but to represent, more strongly, the characteristic marks of ship-fever. The particular description of the fever follows the Meteorological Observations and Monthly Review.

Many of those who in the preceding months are classed fever patients, were so slightly affected, as to bring their complaints, not improperly, under the appellation of colds; but as they had all *some* feverish symptoms, for the reasons before-mentioned, I have classed them fevers.

The symptoms were mild intermitting complaints. The pulse was very different in different patients: the symptoms were thirst; loathing of food; nausea; head-ach; cough; sore throat; hoarseness; acute pains of the
sides;

fides; pain of the back; *and in all their bones**; or universal pains; straitness about the breast; pains and constipation of the bowels; deafness accompanying a sore throat; though this seldom occurred; giddiness; especially in the month of May.

I let blood in some cases only. Gentle evacuations by vomit and stool; and promoting a moderate diaphoresis with essence of antimony or tartar emetic, together with opiates occasionally; or boluses of spermaceti and nitre; or the oily mixture occasionally; with diluting drink; and volatile liniment applied to the throat, recovered the patients in a few days.

Although these were the most general symptoms, yet many had the fever in a severer manner, as appears from the violence and duration of the symptoms collected from *all the cases* daily stated. But neither the pleuritic case, nor two other cases which proceeded from putting a corpse into a coffin, and indeed were slight, are mentioned. It must not, therefore, be understood that all the symptoms mentioned in any one day, occurred in a single case.

1. They were seized with chilliness and rigors, succeeded by heats; thirst; and universal pains and uneasiness; with pains in the side and back; diffi-

* These are the words of the sick.

culty of breathing; straitness about the throat; great hoarseness; cough; head-ach; giddiness; and nausea; the pulse quick and full.

2. Some had very restless nights; without any remission of head-ach. A pain that went round in the direction of the diaphragm, accompanied with dry, urgent cough; some had pain of the breast that affected respiration. The countenance was flushed; and the eyes watered. Remissions; paroxysms; with costiveness, profuse sweats, and thirst continued. The pulse in some was full and quick.

3. The paroxysms continued above twelve hours, with symptoms as severe as on the first. Pains in the knees; pains about the shoulders; frequent cough, and little expectoration. Slight cough, and pain were complained of only by some.

4. Though the sick were cool, they were harassed by dry, urgent cough, with pain at the scrobiculus cordis. The remission continued six hours, and the next paroxysm eight. Stiffness about the eyes; weakness; pain of the breast; and head-ach from cough. They began to expectorate.

5. They sweated profusely last night; were teased with cough; weakness; and much pain about the breast; with either no expectoration, or a difficult one in some cases. No appetite, and the tongue white. Of the slight fever, the pulse of one patient who was subject to epilepsy, became quick and full, with giddiness and head-ach.

6. In the epileptic case there was a degree of stupor.—P. m. an accession of fever; the skin was hot and dry, the tongue parched; thirst; large quantities of urine, and languor; though some were recovering.

7. In the epileptic case, the paroxysm went off in the night, by a large quantity of urine, and a copious stool. P. m. a paroxysm came on—an accession of fever happened after the patient had been in a recovering state for four days—weakness—recovering slowly.

8. A difficult respiration, with cough—pain of the back and weakness—some recovering—the paroxysm of the epileptic case ended as the preceding. P. m. a paroxysm came on.

9. Cough and hoarseness continued—the epileptic patient uncertain when the paroxysm left him, and complained of his back.

10. A free expectoration, and recovering—the epileptic man passed an indifferent night; his head ached and was giddy, and his mouth and tongue were foul.

11. The epileptic patient had shooting pains in his head at times, but was recovering. One recovered*.

12. It was discovered that the epileptic patient was very lousy, though recovering. Hoarseness continued—weakness.

* TIDFORD, with bark.

13. It was a considerable time before he recovered his spirits, and he was invalided the 25th of June.

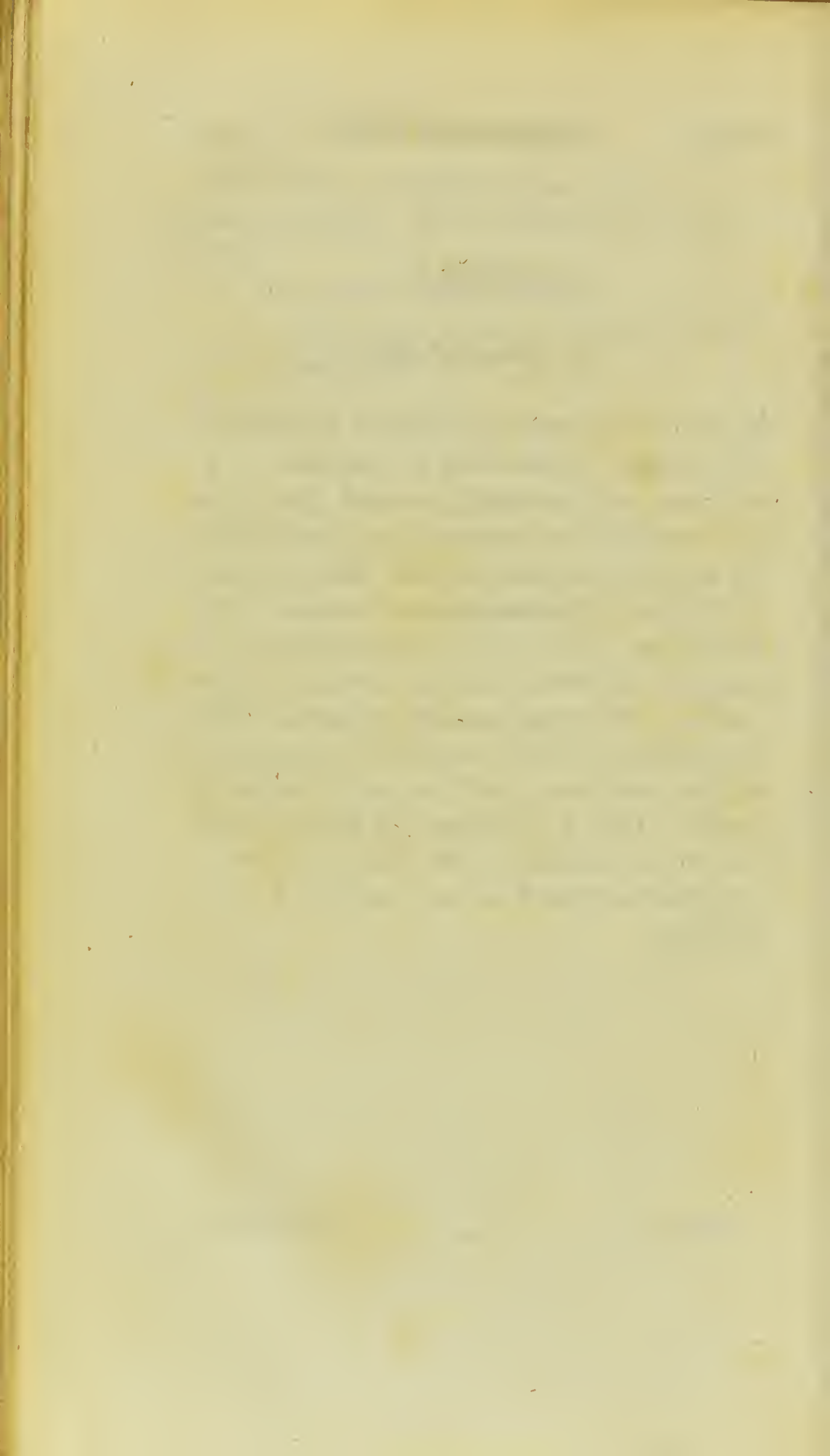
14. One patient continued weak, and was sent to the hospital; but this man's breast was hurt by a fall not long before.

CHAPTER V.

The Method of Cure.

IT was not a general rule with me to let blood;—that operation depended solely on circumstances. A vomit was most commonly given first. But if the patient was bled, the vomit was given a few hours after, and from xxv. to xl. drops of essent. antimon. with refrigerating and diluting drink at night. Next morning an ounce of the bitter purging salts was given, and the essence of antimony repeated in the evening. After these moderate evacuations (which were seldom repeated) I prescribed cort. peruv. $\mathfrak{z}$ i. or $\mathfrak{z}$ iss. every hour, until the patient was out of danger. Then it was given less frequent; with elix. vitr. occasionally. After I began to give the bark, I did not omit it for any exacerbation of the symptoms.

CHAPTER



CHAPTER VI.

METEOROLOGICAL OBSERVATIONS AND STATE OF
THE SICK LIST ON BOARD THE JUNO, FROM
SEPT. 1, 1776, UNTIL JUNE 30, 1777.

Time.	Thermo- meter.	Latitude, d. p. or r.	Longi- tude in, m. or o.	Moon.	Winds.	Rain or Dew.	Atmo- sphere.
1776 Die Sabbati Sept. 1	60	Off Cape Moriere, 48° 58"		19	v WbS *	.	cl.
2	60	a. & s.		20	v SWbW *		ch.
3	63	Hills- burgh Bay.		21	v NWbW *		ch.
4	65			22	v SEbE **	.	cl.
5	61 $\frac{1}{2}$			23	v SEbE **		cl.
6	61	s.		24	N v **	.	ch.
7	63	Off Madame.		25	N v —		c.
8	64	44° 45"	00° 51" W	26	f SSWtW ****	..	cl. f.

STATE of the SICK LIST, &c.

1. There were in the sick list, two with dysentery; one with scurvy; one with sciatica; one with consumption, or hectic; one with cough; one with deafness; and one with strain. Eight patients in all. We were now sailing down the river St. Laurence.
2. The patient with sciatica; and the other with strain recovered. Six remained ill. We caught a few cod, and anchored for two hours off the island of St. John.
3. No alteration of the sick. Off Hillsborough-bay at anchor. A. m. a boat was sent up the river to the Lizard, with orders for Capt. Mackenzie.
4. One dysenteric patient recovered. Three were admitted with dysenteric symptoms. Eight patients. We weighed, and anchored in the bay. Nothing to be bought on shore; the rebels having plundered the few inhabitants of every thing. A fever prevailed on board the Lizard, and likewise on shore.
5. The patient with deafness recovered. One with abscess complained. Eight ill. They are eat up with field-mice on shore.
6. One of the patients who were added the 4th, recovered. One complained of ophthalmia. Eight sick. The inhabitants say, that they caught the fever from the Lizard's men, or from an armed vessel's that were very sickly, which sloop the Lizard relieved. I have since been informed, it was from that vessel that the Lizard's people got the infection. We bought a few bad and very dear vegetables; and a little milk for the scorbutic patient, a boy. Sailed at noon.
7. Another of those who were added to the list on the 4th, is well. Seven remain ill. A. m., we sailed through the gut of Canceaux; and p. m. we caught a few cod opposite Isle Madame.
8. One complained of dysentery; and one of abscess. Nine in the list. A very disagreeable day.

Time.	Thermo- meter.	Latitude, d. p. or r.	Longi- tude in, m. or o.	Moon.	Winds.	Rain or Dew.	Atmo- sphere.
Sept. 9	61	Off Cape Breton, 45° 23"		27	NW **		c.
10	61 $\frac{1}{2}$	44° 42" a. p. m. Beaver- harbour.		28	f NW t SW **		ch.
11	63 $\frac{1}{2}$			29	S **	.	f. cl.
12	60	a. m. s.		n. m.	NNW *		c.
13	63 $\frac{1}{2}$	a. m. a. Halifax, 44° 45"	in 64° 35" W	1	SW v *		c.
14	65			2	v **		cl.
15	65			3	v WbS *	..	h. f.
16	56			4	NW **		c.

STATE of the SICK LIST, &c.

9. One complained of contusion. Ten sick. We caught a few fish off Cape Breton.
10. The flux patient of the 8th recovered. One complained of dysentery, as did also the patient with the cough; and one of the cutter's crew who had been on board the Lizard complained of fever. Twelve patients. Query. Do the fish, our men catch, contribute to the dysenteric symptoms among them? P. m. we anchored in Beaver Harbour. One family on shore at this place, only.
11. The patient added yesterday with the fever, is well. Eleven ill. Our men caught plenty of fish alongside of the ship, and trucked with the fishermen for dry fish, milk, and potatoes. An Indian and his squaw came on board.
12. The patient who complained on the 10th of dysentery, and is well. Ten in the list. A. m. we sailed.
13. No alteration of the sick. We anchored in Halifax harbour. The Milford, and three armed vessels, here.
14. The other patient of the 4th; one of the 5th; and one of the 8th with abscess; and another of the 10th with head-ach, recovered. Six ill.
15. No alteration of the sick. We were served fresh beef. Forty of our men were sent up into the wood on duty, with two gentlemen of the quarter-deck, and a serjeant.
16. One complained of fever yesterday p. m. who had two paroxysms before he complained. I am informed that he was one of the cutter's crew which was on board the Lizard at St. John's. Seven patients. Spruce beer was begun to be served to the ship's company. I proposed to the captain to have a tent erected on shore for the sick, but he would not allow it. Many of our people, especially the marines, got drunk, were ungovernable, and staid on shore all night.

Time.	Thermo- meter.	Latitude, d. p. or r.	Longi- tude in, m. cr o.	Moon.	Winds.	Rain or Dew.	Atmo- sphere.
Sept. 17	56 $\frac{1}{2}$			5	NW **		cl.
18	63			6	v W *		ch.
19	64			7	v NNW *		c.
20	61 $\frac{1}{2}$			8	NWbN *		c.
21	64			9	S v *		cl.
22	65 $\frac{1}{2}$			10	v SW *	..	ch. f. &c.
23	64 $\frac{1}{2}$			11	SSE *		ch. f. &c.
24	57 $\frac{1}{2}$			12	NNW *	...	f.
25	57 $\frac{1}{2}$			13	NNW *.*.*	..	ch.
26	59 $\frac{1}{2}$	s.		14	W **		c.

STATE of the SICK LIST, &c.

17. The patient who was added yesterday recovered. Three complained of dysenteric symptoms. Nine in the list.
18. One complained of hæmorrhoids. Ten ill. The men have fresh beef served them four times a week, and soft bread. The scorbutic patient very ill; men sent to-day to cut wood for the ship's use.
19. The other dysenteric patient, who was on the list the 1st, was added the 29th ult. with head-ach; and one of those added the 27th recovered. One complained of wound; one of strain; and one of contusion. Eleven patients.
20. Another of those added the 17th, is well. One complained of dysentery. Eleven sick. Some of the sick sent ashore to walk.
21. The patient of the 18th, recovered; and one added with strain. Eleven ill. His Majesty's ship *Rainbow* came in from New York.
22. The patient who had an old cough, returned to duty; and the other of the 17th, is well. Two added with fever, one of whom was returned well on the 19th, only; he formerly belonged to a boat; the other was one of the long boat's crew, I believe, and was on board the *Lizard*. Eleven in the sick list.
23. One complained of belly-ach. Twelve patients.
24. The contused patient of the 19th is well; three with dysenteric symptoms added to the sick list. Fourteen in it. A very wet, disagreeable day.
25. The patient added the 20th, and two of those added yesterday, are well; one complained of wound. Twelve men ill.
26. One of those added the 22d recovered, and the other patient of the 24th is well; one complained of feverish symptoms. Eleven sick. A. m. we sailed on a cruise.

Time.	Thermo- meter.	Latitude, d. p. or r.	Longi- tude in, m. or o.	Moon.	Winds.	Rain or Dew.	Atmo- sphere.
Sept. 27	60 $\frac{1}{2}$	44° 06"		p.	SW _v **		cl.
28	55 $\frac{1}{2}$	43° 29"		16	NNW **		c.
29	55 $\frac{1}{2}$	43° 30" a. p. m. Le Have.		17	V ***		ch.
30	59			18	SSW **		f.
Oct. 1 Die Mart.	59 $\frac{1}{2}$	a. m. s.		19	NW *		c.
2	54	43° 49"		20	WNW _v **		c.
3	56	42° 50"	00° 33"W made.	21	ESE _v **		c.
4	58 $\frac{1}{2}$	42° 36"	01° 09"W	22	ESE _v **	.	f.
5	58	42° 42"	01° 01"W	23	ENE **		ch.
6	54 $\frac{1}{2}$	42° 56"	01° 03"W	24	ENE _v *	.	ch.
7	59	43° 15"	01° 56"W	25	E _v **		ch.
8	58 $\frac{1}{2}$	40° 03"	01° 49"W	26	SE _v *		ch.

STATE of the SICK LIST, &c.

27. No alteration of the patients. One complained of wound who does duty. Indifferent weather.
28. The patient added the 26th recovered. The dysenteric patient returned to duty the 26th relapsed; one complained of an old strain; and one of scald. Thirteen in the list.
29. One complained of old eruptions, who does duty. P. m. we anchored in Le Have harbour. It blew hard in the night.
30. The contused patient of the 9th; the dysenteric patient; one with scald added the 20th; and one with a slight complaint recovered. One, a marine, complained of fever with dysenteric symptoms. Ten in the list; viz. two with fever; one with scurvy; one with consumption; one with ophthalmia; two with strain; one with contusion; and two with wound.
1. The two with strain; and one with contusion recovered. Seven in the list. Our people caught fish; they also trucked for potatoes, pumpkins, and milk. We sailed a. m. on our cruise.
2. The patient with fever, added the 30th ult. is recovered. Six patients.
3. Two complained of fever; one of them was taken ill several days ago. Eight ill.
4. The man with ophthalmia is recovered. Seven sick.
5. No alteration of the list.
6. One of those who were added the 3d is recovered. One admitted with fever. Seven sick.
7. The other patient who was added on the 3d is well. One complained of fever; and one of eruption. Eight in the list.
8. Two added with dysentery; one with fever; and one with rheumatism. Twelve in the list.

Time.	Thermo- meter.	Latitude, d. p. or r.	Longi- tude in, m. or o.	Moon.	Winds.	Rain or Dew.	Atmo- sphere.
Oct. 9	60 $\frac{1}{2}$	42° 58"	01° 56" W	27	WSW *	.	ch.
10	60	43° 07"	00° 06" E	28	NNW v **	.	ch.
11	53 $\frac{1}{2}$	44° 06"	01° 04" E	29	v NbW **	.	cl.
12	49	44° 09" p. m. a. Halifax.		n. p. m.	WSW **		c.
13	53			1	WSW v **		c.
14	53			2	WNW *	h. f.	cl.
15	53			3	v **		c.
16	54			4	SbE — *		ch.

STATE of the SICK LIST, &c.

9. One complained last night of fever. Thirteen patients.
10. One admitted with fever. Fourteen sick. The fever is uncommonly obstinate.
11. The two patients who complained the 7th; the one with rheumatism on the 8th; and the one added the 9th are recovered. One complained of fever. Eleven sick men.
12. Two admitted with fever; and one with contusion. Fourteen ill. P. m. we anchored at Halifax. The Pembroke arrived from England.
13. Three complained of fever; one of them was a wounded patient. The marine who was added the 6th with fever died. Soon after his decease, many livid blotches appeared on the body; particularly on the parts he lay upon during his illness. The fever patients chiefly complain of their head. They are generally seized with rigors, followed, in some cases, with vomiting and purging, and the purging, in some cases, continues. Others are seized with sickness at stomach only; but some are seized with costiveness, which continues throughout the illness. All of them loathe their food, and most of them complain of universal and wandering pains. Fifteen on the list.
14. The contused patient of the 12th, is well. Fourteen patients. The fever patients are not kept in bed in the day. They have very irregular remissions.
15. One marine added with fever. Fifteen sick. It is not clear to me where we caught the infection; though most probably it was from the Lizard. There was an armed brig at Hillsborough, St. John's, while the Lizard laid there, from which the surgeon of the Lizard thought they caught the fever. We had also communication with that brig. Vide the 6th instant.
16. One marine, and one seaman complained of fever. Seventeen ill.

Time.	Thermo- meter.	Latitude, d. p. or r.	Longi- tude in, m. or o.	Moon.	Winds.	Rain or Dew.	Atmo- sphere.
Oct. 17	58 $\frac{1}{2}$			5	V * —	. .	cl.
18	61 $\frac{1}{2}$			6	SE v **		cl.
19	58 $\frac{1}{2}$	a.m. s.		7	W v **	.	cl.
20	57 $\frac{1}{2}$	Le Have 43° 50'		8	NW v *****		cl.
21	58 $\frac{1}{2}$			9	SW v ***		cl.

STATE of the SICK LIST, &c.

17. The other lame patient added the 19th ult.; the one on the 10th; one added the 12th; and one added the 13th recovered. One seaman and one marine complained last night of fever. One marine added with piles. Sixteen in the sick list. Blood taken from one of the fever patients added yesterday appeared sily. The men were served fresh beef.
18. No alteration of the sick. The blood taken from a patient who was added the 8th was very little sily, and of a very loose texture; the blood of the other patient taken ill yesterday was less so.
19. Two complained last night of fever, one of whom had it lately; and two complained to-day of fever. One of them was seized with bilious vomiting. Twenty patients. I applied to have the ship smoked with vinegar and gunpowder, which was done; and I requested that she might not be washed below during the winter. A. m. we sailed with two sloops under our convoy.
20. One of those added the 13th, and two of them added yesterday recovered. One complained of fever, who had been ill four or five days. Eighteen sick. Two of the patients complained of coughs; and two of fixed pains. Towards the end of the paroxysm the sick complained chiefly of giddiness, and their heads being quite light. The blood of one of those added to-day had a thin buff on it; and the crassamentum, though loose in its texture, bore a greater proportion to the serum than common. We anchored at Le Have.
21. The two added with dysentery on the 8th, had the fever, and are recovered. Sixteen ill. The happiest effects have ensued from blisters applied in the beginning of the fever in many cases. Petechiæ appeared on several patients, which are most distinctly seen when the sick are in a state of perspiration; but their visible duration is uncertain. The captain bought milk for some of the patients.

Time.	Thermo- meter.	Latitude, d. p. or r.	Longi- tude in, m. or o.	Moon.	Winds.	Rain or Dew.	Atmo- sphere.
Oct. 22	53			10	NWbW v ***	.	cl.
23	52	a. m. s. 44° 01" p. m. a Le Have		11	WNW WSW v **		h.
24	58			12	SW v **		cl.
25	61			13	SW v **	.. t l	f.
26	60	a. m. s. 44° 03"		14	NE v *	.	ch.
27	57 $\frac{1}{2}$	43° 10"	00° 51" W	p. a. m.	NW v *		f.
28	55 $\frac{1}{2}$	43° 47" off Cape St. Mary		16	v **	.	ch.
29	53	43° 46"	01° 10" W	17	NNW v ***	.	ch.

STATE of the SICK LIST, &c.

22. The patient who complained of fever on the 11th recovered. Three complained last night of fever. Eighteen in the sick list. Petechiæ are very common among the patients. I applied to have the ship smoked for an hour only, which was complied with. See 2d of October. The men bought potatoes and turnips ; and caught fish.
23. A boy added with fever, who chiefly complains of sore throat. Nineteen patients. Two of the fever patients have bad coughs. One added the 22d ult. with slow fever is become hectic. He had been a long time ailing. A. m. we sailed ; and p. m. we anchored again.
24. One added the 12th ; one who complained the 18th, p. m. see 19th ; and one of those added the 21st, p. m. see 22d, of fever recovered. The first of these three was the patient with eruptions. Seventeen in the sick list.
25. The man admitted the 17th for piles complained last night of fever. The marine added the 15th with fever recovered. Sixteen patients. One of the fever patients is affected with piles. A number of pollock were caught by one of our boats crew.
26. The boy added with fever on the 23d recovered. Fifteen in the list. The convalescent fever patients relapse from very slight causes.
27. One of the patients added the 16th recovered. Two added with fever, one of whom was afflicted with it before. One marine complained of itch ; and one of slight contusion ; both capable of doing duty. Sixteen sick.
28. Yesterday's relapsed patient recovered. One marine complained last night of fever ; whose principal complaint is violent pain in his stomach. Sixteen ill.
29. Two patients, one is a marine, complained last night ; and three this morning of fever. The two seized last night complained much of their breasts. Twenty-one in the sick list. One added the 27th was delirious, whose tongue is black, and his voice altered. One complained of strain who does his duty.

Time.	Thermo- meter.	Latitude, d. p. or r.	Longi- tude in, m. or o.	Moon.	Winds.	Rain or Dew.	Atmo- sphere.
Oct. 30	47	Bay of Fundy p. m. a		18	NNW v ***		cl.
31	50			19	SW ***	..	ch.
Nov. 1 Die Ven.	58 $\frac{1}{2}$			20	v NNW *	.	ch.
2	52			21	WNW v ***	..	cl.

STATE of the SICK LIST, &c.

30. The marine added the 28th; and one of those added yesterday with fever are discharged. One complained last night of fever, who returned to duty the 20th; and one is admitted with contusion. Twenty-one in the list. The patient with slight contusion of the 27th recovered. A number of the men have slight feverish ailments, who do not complain. P. m. we anchored at Coal Pits.
31. The two that complained the 28th p. m. recovered. See the 29th. The marine who was returned well the 25th relapsed. One complained of fever; and the strained patient of the 29th added to the sick list. Twenty-two ill; viz. sixteen with fever; one consumptive patient; the boy mentioned the 22d ult.; the boy with the scurvy; one with eruption; one with contusion; and one with strain; besides the itch patient. All the patients, which are cases of relapse, are very ill.
1. Two marines, one added the 16th, and one the 17th; and one added the 27th ult. with fever recovered. A boy complained of fever. Twenty patients. I applied and had the ship well smoked twice a. m. with vinegar and gunpowder, and p. m. with junk and tobacco fires, and with hot loggerheads quenched in tar. The ship was covered every where with a white powder. After smoking with tobacco the smell was very strong for some time. Two of our boats were sent up to Fort Cumberland.
2. The other patient added the 16th; the one admitted the 20th; one the 29th ult.; the boy added yesterday, all fever patients; and the strained patients added the 29th are recovered. One complained last night of fever. Sixteen sick, besides the man with itch; and some with slight cough. The air was very agreeable last night to the men who lay in the tiers. Upon every inspiration, after smoking with gunpowder, I tasted the sulphur. The boats returned, and brought a little fresh-beef on board yesterday for the captain and officers.

Time.	Thermo- meter.	Latitude, d. p. or r.	Longi- tude in, m. or o.	Moon.	Winds.	Rain or Dew.	Atmo- sphere.
Nov. 3	46 $\frac{1}{2}$	a. m. s.		22	v NNW *.*.*	s .	cl.
4	46 $\frac{1}{2}$			23	v SW *.*.*	s	cl.
5	52	Off Anna- polis p.m. a.		24	SW v *.*.*		cl.
6	56			25	SW * —		cl.
7	55 $\frac{1}{2}$	a. m. s.		26	NE *.*.*		f.
8	56	43° 15"		27	Nly v **		h.
9	54	Cruising		28	v NNE *		h.
10	57	Off Segvin a.		29	v W * —		h.
11	55	43° 29"	00° 51" E made.	n. a. m.	ENE v **		ch.
12	49 $\frac{1}{2}$	43° 20"		2	f NNE t NNW **		ch.

STATE of the SICK LIST, &c.

3. One who complained the 31st of fever recovered. One complained last night, who had been ill four or five days of fever, accompanied with purging of porraceous matter, and with piles. Several of the fever patients have loose stools; and a number of them have cough. Sixteen men ill. A. m. we sailed.
4. Two complained last night of fever; one had purging, and had been ill a fortnight; the other was taken ill the 30th ult. and one complained of contusion of his breast from fighting. Nineteen sick.
5. The man who complained the 29th ult.; and the two men added yesterday with fever recovered. Sixteen patients. The contused patient of yesterday was seized with fever. Off Annapolis; we afterwards anchored in the Bason.
6. The patient added the 2d with fever recovered. Fifteen on the sick list. Fires were lighted in the hatchways. A. m. we sent a boat up to town.
7. The patient that was added the 3d recovered. Fourteen in the list, besides the itch patient. A. m. we sailed.
8. One complained of fever last night, who had been ailing a fortnight. Fifteen ill.
9. No alteration of the sick list. I applied to have fires lighted in the hatchways.
10. Fifteen men are yet on the list. We could not light fires in the hatchways. We anchored a little while.
11. The relapsed patient added the 30th recovered. The man with itch complained of cough. Fifteen sick. One complained of strain; but he does duty.
12. The patient taken ill the 30th ult.; was added the 4th, and returned the 5th to duty; relapsed the 9th, but did not complain until last night of fever. One added with inflammation in his leg, who had the fever lately. Seventeen in the list. The fever patients are all better, except one, who is very bad. I got fires lighted in the hatchways.

Time.	Thermo- meter.	Latitude, d. p. or r.	Longi- tude in, m. or o.	Moon.	Winds.	Rain or Dew.	Atmo- sphere.
Nov. 13	50			3	NW v *		c.
14	49	43° 58"		4	NW v **		c.
15	49½	00° 31"		5	Nly v * —		c.
16	50½	43° 48"		6	SW v ***		c.
17	48½	43° 20"		7	f NbE t NW **		c.
18	46½	42° 54"	01° 05" E made.	8	Nly v *		c.
19	48½	43° 00"	02° 40" E	9	Nly v *		cl.

STATE of the SICK LIST, &c.

13. The other patient added on the 3th ult. with fever, recovered. One complained of cold from lying on the booms in the barge, and one of slight wound. Eighteen patients.
14. The patient added yesterday with cold recovered. Seventeen sick; besides the patient afflicted with itch. Cruising off the Bay of Fundy.
15. A marine complained last night of fever. This, and the relapsed patient added the 12th caught the infection from a marine recovering of fever. He had been very ill, and was removed from the sick berth back to his own berth; lest the groans or appearance of the patients in the sick berth might frighten him into a state of relapse, as he was a very timid man. The patient added the 8th; and the one the 13th with wound recovered. Sixteen in the list. The strained patient who did duty is now well. We could not get the ship smoked.
16. The patient added yesterday to the list is very ill. One who had just recovered of strain got drunk and complained again; and one added with inflammation. Eighteen ill.
17. The man with piles added the 25th with fever; one added the 22d sent on board of a prize; and the yesterday's strained patient were put off the list. One complained last night of fever, who was taken ill two days before, having caught his illness from the seamen sent on board the prize yesterday with whom he messed. Sixteen sick. We could not get the ship smoked.
18. The patient added the 16th with tumour recovered. One complained last night of ear-ach; and two of fever this morning. Eighteen ill.
19. A boy complained last night of fever, who knew not how long he had been ill. A boy who laid close to him was also seized with the fever; and one added with contusion. Twenty-one in the list.

Time.	Thermo- meter.	Latitude, d. p. or r.	Longi- tude in, m. or o.	Moon.	Winds.	Rain or Dew.	Atmo- sphere.
Nov. 20,	52 $\frac{1}{2}$	43° 20"		10	V *		cl.
21	55	43° 32"		11	SWv ***		c.
22	55 $\frac{1}{2}$	Halifax a. m. a.		12	SWv ***		cl.
23	57			13	SW*	.	cl.
24	58			14	SbE v * —	.	h.
25	57			15	SE*		f.

STATE of the SICK LIST, &c.

20. The contused patient of the 4th; the one added the 18th with ear-ach; and yesterday's contused patient recovered. A marine, succeeded to a berth in which two marines successively had lain, and had had the fever, of which one of them died the 13th ult., complained of fever. One added with contusion. Twenty patients. We fell in with the Lizard; the fever still continued on board of that ship. One man died on the cruise, and several before. The ship is washed and smoked for a little time afterwards. Now there are eleven fever patients on board, besides several of the officers who have the fever.
21. The two other patients of the 18th are well. The fever patient dismissed yesterday, and relapsed by drinking, is again admitted; and one added with ulcer. Twenty patients.
22. A boy complained of fever, who is added to the list, and makes twenty-one ill. A. m. we anchored at Halifax. The sick quarters are so crowded, it is said, that there is no room for our people. The quarters are indeed shamefully bad.
23. The contused patient of the 20th; and one of yesterday's patients are well. The itch patient, besides having cough, is seized with fever; and one is added with wound. Twenty sick, besides my first mate, who is affected with fever. Got the ship with the people's bedding smoked. The last supply of necessaries, by means of the sickness of the ship's company, being expended almost six weeks sooner than the allotted time, I applied for more, but the commissioner would not allow them *.
24. One complained of contusion. Twenty-one in the list. The men were served with fresh beef. The ship and men's bedding were smoked again. My mate recovered.
25. A gentleman, who caught the fever from his messmate, was added to the list, making 22 sick. The fever patients are in a convalescent state; but two of them, in particular, are extremely weak.

* I cannot silently pass over this instance of parsimony so injudiciously exercised, notwithstanding the case was fully explained in the letter of application, which was stated and confirmed by the Captain, because it is only the sick who suffer on such an occasion. No reasoning whatever can, in my opinion, justify such ill-timed parsimony.

Time.	Thermo- meter.	Latitude, d. p. or r.	Longi- tude in, m. or o.	Moon.	Winds.	Rain or Dew.	Atmo- sphere.
Nov. 26	59			16	SW **		f.
27	60			17	NNW * —	.	f.

STATE of the SICK LIST, &c.

26. My second mate was seized yesterday with fever; and a boy, who had been lying about without a hammock for two months past, complained of fever: Twenty-four patients. Eleven of them on recovery from fever; eight of whom are marines. The consumptive patient; the one with diabetes or hectic patient; the boy ill with scurvy; and a marine with old eruptions from a venereal cause, were sent to sick quarters; 15 altogether. In a few days all the sick at quarters are to be removed to George Island, whereon a temporary hospital is to be fitted up, and to be attended by a surgeon, appointed by Admiral Shulldham. The surgeon is to have a similar appointment to the surgeon of an hospital ship. Our ship was thoroughly cleaned, washed with hot vinegar, and afterward smoked with gun-powder, junk and tobacco, as before. Every thing was got on deck, the sick taking all their clothes with them. After all this trouble, 60 supernumeraries were sent on board of us from the Rainbow; eight of whom had fever, two had contusion; one was affected with scorbutic symptoms; and one had ulcer.

27. My mate is recovered. One complained of fever. Seven patients, viz. three with fever, not very ill; and four with complaints of lameness; besides supernumeraries. Upon my representation of the fatal consequences to be apprehended to our ship's company from the fever among the supernumeraries, the captain applied to the senior officer in port, and got an order to send back the eight fever patients to the Rainbow: five of them complained of cough and severe pain in their side or breast, which had been hurt by falls not long before, and by lying about on chests in the Rainbow. They had been sent on board of the Rainbow from the Pembroke, which ship these men had cleared alongside of the wharf; and used to go into town; where they got drunk, and laid in the streets; or in infected houses. But the surgeon of the Rainbow had no suspicion of the infection being on board, and was surprised to hear it. Her men were afterwards very sickly, as I was well informed.

Time.	Thermo- meter.	Latitude, d. p. or r.	Longi- tude in, m. or b.	Moon.	Winds	Rain or Dew.	Atmo- sphere.
Nov. 28	56 $\frac{1}{2}$	p. m. s. & a.		18	NW v ***	.	ch.
29	52 $\frac{1}{2}$			19	Wly *		c.
30	55			20	ESE v **	..	f.
Dec. 1 Die Sab.	55			21	V **	.	cl.
2	51			22	WNW v **	s .	cl.
3	45			23	v NW *	f .	ch.
4	53			24	SSW v **	..	ch.
5	49			25	NW v **		cl.

STATE of the SICK LIST, &c.

28. One complained of rheumatism, to which he was subject, especially in foggy weather. Eight in the sick list; besides the four lame supernumeraries. All hammacoes were scrubbed. P. m. we weighed, and anchored off Major's Beach.
29. The patient added on the 24th is well. One complained of cough. Eight ill. One supernumerary was added last night with contusion. Five of them are ill.
30. One complained last night of strain; one of rheumatic pains; and one of fever, who mcses with the patients added the 27th, which make eleven on the sick list; viz. four with fever; two with rheumatism; one with cough; three with ulcer; and one with strain: besides five supernumeraries; viz. one with scorbutic symptoms; three with contusion; and one with ulcer. I could not get the ship smoked.
1. The patients added the 26th and 27th ult. and the two rheumatic patients, recovered. Seven sick. The two contused supernumeraries of the 26th are recovered. Three of them yet remain ill. I could not get the ship smoked.
2. The boy added on the 26th; and another with cough on the 29th ult. are recovered. Five patients remain in the sick list. One supernumerary, who complained last night of fever, is recovered; three of them bad yet. One of them with ulcer, fractured his clavicle lately; and another has an old rupture. Squally weather with snow.
3. The boy relapsed last night; he has had an inguinal rupture a considerable time, but never mentioned it before. Six ill. I got the ship smoked for a short time.
4. A boy added with abscess. Seven sick; besides the three supernumeraries.
5. No alteration of the list. The ruptured supernumerary dismissed.

Time.	Thermo- meter.	Latitude, d. p. or r.	Longi- tude in, m. or o.	Moon.	Winds.	Rain or Dew.	Atmo- sphere.
Dec. 6	46 $\frac{1}{2}$	s.		26	Nly v *		c.
7	51	43° 27"	00° 34" E made	27	Wly v **		cl.
8	53 $\frac{1}{2}$	42° 25"	00° 48" E	28	Wly v **		cl.
9	51 $\frac{1}{2}$	41° 24"	00° 21" E	29	NNW v *.*.*		
10	49	40° 22"	00° 08" W	n.	N v ***	. sh	cl.
11	55	39° 12"	00° 42" W	1	NNW v **	.	ch.
12	57 $\frac{1}{2}$	39° 17"	02° 50" W	2	SE v ***	.	cl.

STATE of the SICK LIST, &c.

6. One complained of fever, that had lately been exposed a day and a night to rain, in assisting to get off a transport which ran aground. Eight in the list. One supernumerary complained last night of fever; three of them ill. Sailed, a. m. with the Amazon, Scarborough, and 34 transports, to New-York.
7. A marine, who attended the sick before they went to quarters, complained of fever. Nine patients; besides the supernumeraries.
8. Last night three complained of fever; two of them are cases of relapse. The boy added the 26th ult. is well. Eleven sick. The supernumerary who was added the 6th is well. Two complained last night of fever. Four are ill. The fever patients complain much of chilliness, and are dejected; the pulse is neither very quick nor full; the tongue is whitish, and they have little thirst. The three added last have bad coughs, and one of them was, at first, seized with syncope.
9. A marine complained last night of fever; one added with wound; and another with old strain. Fourteen patients in the sick list. One of the supernumeraries added yesterday, is well. One complained of fever; and one of rheumatism. Five of them ill. A gale of wind.
10. The strained patient added the 30th ult.; was rheumatic, and is well. Last night one was added with fever; and another with contusion. Fifteen sick. A supernumerary, an old man, who lately had cough, complained of fever. Six supernumeraries are ill. The gale of wind continues. Lost company of the Scarborough and many of the transports.
11. One complained of fever, who had it before; and one of fracture. Seventeen in the list.
12. One of those added on the 8th; and another on the 18th with fever are well. One complained of fever; and two of contusion. Eighteen patients. The rheumatic supernumerary of the 9th is well. One, from messing with the gentleman who had the fever, was seized with it last night; and another this morning. Seven ill.

Time.	Thermo- meter.	Latitude, d. p. or r.	Longi- tude in, n. or o.	Moon.	Winds.	Rain or Dew.	Atmo- sphere.
Dec. 13	61 $\frac{1}{2}$	38° 34"	03° 30"W	3	NNE v *.*.*		cl.
14	63	39° 45"	04° 24"W	4	v W ***	.	cl.
15	54 $\frac{1}{2}$	39° 13"	in 04° 13"W	5	NNW v ***		cl.
16	59	39° 15"	04° 36"	6	W v ***	..	cl.
17	56 $\frac{1}{2}$	38° 53"	05° 41"	7	NE v **	.	ch.
18	58	38° 06"	07° 30"	8	f WbN t NWbW ***	,	cl.

STATE of the SICK LIST, &c.

13. The patient of the 6th, and a marine added the 8th, with fever, are well. One complained of fever. Seventeen in the sick list. The fever supernumerary of the 9th is well. Six of them are ill. P. m. the Beverly brig, one of the convoy, made a signal of distress; being extremely leaky, the people were taken out of her, and sent on board of different ships. An officer, with sixteen soldiers; three women; and their children were brought on board of us.
14. A marine complained last night of fever; and one added a.m. with contusion. Nineteen ill. One of the supernumeraries added the 8th; and one the 12th with fever, are well. Four remain sick. A gale of wind.
15. One of the contused patients of the 12th; and one of the 13th recovered. The marine returned well the 13th complained of rheumatism. Eighteen men in the sick list. A gale of wind.
16. One of the patients with old ulcer; one added the 8th with fever; another of the 10th with contusion; and the contused patient of the 14th are recovered. One complained of fever. Fifteen ill. Two supernumeraries added last night with fever; and another, this morning, with ulcer. Seven of them ill. One of the soldiers complained of scrophula. A gale of wind.
17. The boy added the 4th; and the marine added the 7th, are well. One complained last night of fever; and one a. m. of strain. Fifteen in the sick list. The supernumeraries added yesterday are recovered. Two more added with contusion.
18. Two complained last night; and one a. m. of fever. Eighteen sick. One supernumerary returned well the 14th, complained of cough. Eight of them ill; besides the soldier. The Amazon parted company with us, taking one ship that had money on board, under her convoy. A gale of wind.

Time.	Thermo- meter.	Latitude, d. p. or r.	Longi- tude in, m. or o.	Moon.	Winds.	Rain or Dew.	Atmo- sphere.
Dec. 19	55 $\frac{1}{2}$	37° 45"	07° 02"	9	N ***	s	cl.
20	57 $\frac{1}{2}$	37° 34"	08° 12"	10	N v **	.	cl.
21	63	39° 15"	09° 04"	11	SE v ***	. . 1	cl.
22	56 $\frac{1}{2}$	39° 52"	08° 36"	12	v WbN ***	s. .	cl.
23	53 $\frac{1}{2}$	40° 01"	08° 07"	13	NWbW v **		cl.
24	51 $\frac{1}{2}$	38° 34"	08° 56"	14	Nly v **		ch.
25	50	38° 54"	10° 07"	15	NE v **		cl.

STATE of the SICK LIST, &c.

19. The patient added the 12th; and one the 17th, with fever, are well. One complained of rheumatism, to which he is subject; and another of contusion. Eighteen men ill. No other alteration. Very bad weather.
20. The fever patient of the 14th; and one with strain of the 17th are well. A marine, who had been ill of fever before, relapsed. Seventeen patients. The most harassing symptom among the fever patients at present is cough. The supernumerary added the 16th with ulcer is recovered. Seven of them are ill; besides the soldier.
21. The patient of the 15th recovered. One who had been put in an infected berth, was seized with fever. Seventeen men in the list. No other alteration. By inquiry, I can very easily trace in what manner the patients are infected. We have had very bad weather, incessant lightning, and a heavy sea. Between decks, where the people lie, is very wet; and the air hot, confined, and disagreeable, from the hatches being battened down on account of the bad weather. Numbers of the sick are wet in their hammocks, from sea water running down upon them; and are much crowded with the supernumeraries. The sick berth is not only small, but in a bad place.
22. The rheumatic patient of the 19th is well. One complained of strain. Seventeen ill. One supernumerary added with fever. Eight besides the soldier are ill.
23. Two complained last night of fever. Nineteen in the list. I applied to have the ship smoked. The decks were washed, and fires made, afterwards, between decks.
24. The patient added the 22d is recovered. A marine complained last night of fever; and another of habitual rheumatism. Twenty on the sick list. One of the supernumeraries added with rheumatism. Nine besides the soldier, are ill. Fires were lighted in the hatchways.
25. One added with habitual rheumatism. Twenty-one sick. The supernumerary added the 22d is well. One complained of cough and rheumatism; and one rheumatic patient was seized with fever. Nine besides the soldiers, are ill. Fires were lighted in the hatchways.

Time.	Thermo- meter	Latitude, d. p. or r.	Longi- tude in, m. or o.	Moon.	Winds.	Rain or Dew.	Atmo- sphere.
Dec. 26	56	40° 12'	11° 15''	16	EbN v ***	. .	cl.
27	54	39° 45''	10° 51''	17	NW v *		ch.
28	51	39° 35''	11° 20''	18	NNW v **	s.	cl.
29	46 $\frac{1}{2}$	39° 30''	12° 57''W	19	N v **		cl.
30	50 $\frac{1}{2}$	O r Egg Island.		20	SW v *		h.
31	53 $\frac{1}{2}$	Sandy Hook. p. m. a.		21	ENE v *		cl.

STATE of the SICK LIST, &c.

26. The marine added the 23d is well. One added with abscess. Twenty-one men in the list. The ruptured supernumerary complained. Ten ill. One soldier complained of abscess, and habitual flux. Two of them ill. P.m. the other man, added on the 23d, died delirious of fever. He was remarkably dejected from his being first seized, and continued so. Very bad weather.
27. A marine, added with fever the 29th; and the patient of the 25th recovered. Six complained of fever last night. Twenty-four men sick. Of whom fourteen are fever patients. Two of the rheumatic supernumeraries have fever. The sick berth smelt offensively, before it was smoked to-day.
28. The patient added the 21st is well. Two complained last night of fever. One of them a marine. Twenty-five in the list, besides the supernumeraries. Fires were lighted in the hatches, and the sick berth smoked and cleaned.
29. One of the contused patients of the 12th; and the patient of the 26th are recovered. One complained last night of fever. Twenty-four ill. The supernumerary of the 18th recovered; and one complained of belly-ach. Ten supernumeraries ill; besides the soldiers. The sick berth was again cleaned and smoked.
30. The marine added the 24th; and two of the patients added the 27th recovered. One complained of fever; one of rheumatism; and one of inflammation. Twenty-four in all. The supernumerary added yesterday recovered, but was seized with fever in the afternoon. No other alteration. The sick berth was again cleaned and smoked.
31. One patient added the 18th; one the 27th; one the 29th; and one yesterday added with fever are recovered. A marine, who lay between two fever patients complained last night; and two this morning of fever. Twenty-three patients; viz. fourteen with fever, chiefly in a convalescent state; two with rheumatism; one with fracture; one with strain; one with contusion; one with inflammation; one with wound; and two with foul ulcer. The supernumerary added

Time.	Thermo- meter.	Latitude, d. p. or r.	Longi- tude in, m. or o.	Moon.	Winds.	Rain or Dew.	Atmo- sphere.
1777 Jan. 1 Die Mer.	53	s. N York a. North River.		22.	SE *		cl.
2	46 $\frac{1}{2}$			23	NW **		c.
3	42 $\frac{1}{2}$			24	NW *	f	cl.
4	42 $\frac{1}{2}$			25	NWN **	f	cl.

STATE of the SICK LIST, &c.

added yesterday is well. Nine remain sick; viz. five with fever; two with rheumatism, of whom one does duty; one with rupture; one with contusion; and one with ulcer. Two soldiers, one with scrophula; the other with habitual flux. Thirty-five patients in all. Nine p. m. we arrived at Sandy-Hook. Fires were lighted in the hatchways; and the sick berth was cleaned.

1. Two complained last night, and two this morning of fever; one was the marine with strain; two added with old cough. Twenty-eight patients. Two supernumeraries added with fever; one with old cough; one with scurvy; and another with rheumatism. Fourteen ill. A passenger in the cabin, who caught the infection from Captain Dalrymple's servants, complained of fever. Forty-five in all, including the two soldiers. Sailed and anchored off New York. Lord Howe commands in chief, and is very ill. Cleaned the sick berth well.
2. Sent twelve fever patients, chiefly in a convalescent state, to the hospital at Brooklyn, Long-Island. One added the 27th, and another on the 29th with fever recovered. Three complained of fever; one of them is a servant of the captain's, who had been ill before, and another has contusion. Eighteen in the list. Three supernumeraries sent to the hospital with fever. One added with contusion. Thirteen ill; besides the passengers and soldiers. Fires were lighted in the hatchways.
3. Sent four with fever; the patient with punctured wound whose hand was inflamed; and another with bad ulcer to the hospital. Twelve men on the sick list. Three supernumeraries with fever; and the scorbutic patient were sent to the hospital. Nine ill besides the passenger. The soldiers and women were landed. The ship was well cleaned, washed with vinegar, and afterwards dried with fires.
4. Sent, one of those added the 2d with fever, to the hospital. One patient of the 31st ult.; and another of the 1st recovered of fever; and also the rheumatic patient of the 24th ult. Eight patients in the sick list. Fires were lighted. Frost.

Time.	Thermo- meter.	Latitude, d. p. or r.	Longi- tude in, m. or o.	Moon.	Winds.	Rain or Dew.	Atmo- sphere.
Jan. 5	41 $\frac{1}{2}$			26	NW *	f	cl.
6	41			27	NW *	f	c.
7	38 $\frac{1}{2}$			28	NWN **	f	c.
8	38			29	NWN **	f	cl.
9	39			n. a. m.	WNW **	s	cl.
10	36 25			2	NWW *	f	cl.

STATE of the SICK LIST, &c.

5. My second mate was again seized with fever last night. Nine sick. Two supernumeraries complained; one of scald; the other of inflammation. Eleven bad. Spruce beer served to the ship's company.
6. One added with inflammation. Ten ill. Three supernumeraries added with fever. Fourteen bad.
7. One added with rheumatism. Eleven patients in the list. The supernumerary added the 5th with inflammation recovered. Thirteen ill.
8. The patient of the 30th ult. with inflammation recovered. Ten in the sick list. The passenger is well. No other alteration. I am informed that the physician of the hospital thinks there is nothing the matter with our fever patients. It is true most of them sent the first day were in a convalescent state; but even from the situation in which they were sent, it was obvious that a virulent infection prevailed on board the ship to which they belonged: had he paid any attention to them. But he appeared to be in age and imbecility, and an allowance was accordingly made for him.
9. The patient with fracture, added the 11th ult.; one of those with cough on the 1st; and my mate are recovered. Sent the boy with rupture to the hospital. Six ill.
10. The other man, added the 1st inst. with cough; and one the 6th are well. A marine, who had it twice before, was seized last night with fever; and one this morning. Six in the list. Sent six of the supernumeraries to the hospital; viz. two with rheumatism; one with cough; one with fever, and ruptured; one with ulcer; and one with contusion. Two supernumeraries complained of fever; nine of them are now ill. Two of them have scurvy, though one of them does duty. The thermometer being placed on deck, stood at 25.

Time.	Thermo- meter.	Latitude, d. p. or i.	Longi- tude in, m. or o.	Moon.	Winds.	Rain or Dew.	Atmo- sphere.
Jan. 11	39			3	WNW _v **	f	cl.
12	39			4	NW **	f	c.
13	39 $\frac{1}{2}$			5	NW**	f	c.
14	39 $\frac{1}{2}$			6	NW **	f	c.
15	41 $\frac{1}{2}$			7	WNW **	f	c.

STATE of the SICK LIST, &c.

11. One of yesterday's patients recovered. One complained of sore throat; and one of contusion. Seven ill. Two of the supernumeraries added the 6th do duty. One is added with scorbutic lumbago; eight of them ill; one of whom has scurvy. Sent the marine, who was added yesterday, to the hospital.
12. Two complained of nephritic symptoms. Eight sick; besides the supernumeraries. Many of the men get drunk every day with New-England rum.
13. Yesterday's patients recovered. Three seized with fever, who have swelling about the glands of the face and throat; but complain chiefly of their heads, and deafness; three added with cough; and one with dysenteric symptoms. Thirteen patients. One of the contused supernumeraries, added the 17th ult. and seized with the rheumatism since, is recovered. One complained of fever; one of cough; and one became scorbutic. Ten of them are ill.
14. One of the patients added yesterday, died of his fever at 3 a.m. How long he had been ill before he complained, I know not; the other two were sent to the hospital. One complained of contusion. Eleven patients in the sick list. One of the supernumeraries added the 6th; one the 10th with fever; one the 11th; and yesterday's fever patient are recovered. Six of them remain ill. The *Flora* arrived from Halifax. Three of our men that were sent to sick quarters there, came in her;—the boy who was so ill of the scurvy, and two others. The gentleman and two of the men, who were put on board one of our prizes, were lost by the prize being run ashore near the light-house, Halifax; the other two were saved, and came in the *Flora*. Some more of our men, who were on board of another prize, also came in her. Our ship was haled along-side of a wharf, and moored out of the stream of ice.
15. The contused patient of the 11th, and one added the 13th with cough, recovered. Two added with fever, one of whom came in the *Flora*; one with contusion; and the scorbutic boy with weakness. Sixteen men in the list. Three of the supernumeraries who were ill have entered for the ship. One supernumerary complained of cough. Four are now ill.

Time.	Thermo- meter.	Latitude, d. p. or r.	Longi- tude in, m. or o.	Moon.	Winds.	Rain or Dew.	Atmo- sphere.
Jan. 16	48			8	SW **	s	h.
17	44			9	NW **	f	c.
18	42			10	NNW **	f	c.
19	43			11	S **	f	h.
20	46			12	NW SW **		ch.
21	52 F			13	f SSW t NW *		ch.

STATE of the SICK LIST, &c.

16. The patient added the 2d with contusion ; and the other with dysenteric symptoms recovered. One complained of suppression of urine, and two more of the ailing supernumeraries entered for the ship. Seventeen in the list. One supernumerary recovered. One remains ill.
17. The rheumatic patient of the 30th ult. ; and the fever patient of the 15th, who came from the *Flora*, recovered. One complained of fever ; and one of rheumatism, who had it lately. Seventeen patients. The contused patient added the 14th is ill of fever. No other alteration amongst the sick.
18. Sent the patient added the 16th ; and the one admitted yesterday with fever to the hospital. One scorbutic patient, formerly a supernumerary, was sent to the hospital ship. One complained of cough. Fifteen sick. Sent the scorbutic supernumerary to the hospital ship. One complained of cough. Very cold.
19. Sent two bad fever patients to the hospital ; viz. a supernumerary added on the 10th, but since entered for the ship ; and one contused. A fever patient of the 15th is recovered. Twelve remain in the list. No other alteration. Smoked the ship.
20. The carpenter added with fever ; and another with scorbutic symptoms. Fourteen patients. One of the patients added the 13th with cough is seized with fever. No other alteration. Smoked the ship.
21. Sent three with fever to the hospital ; one of them was added the 13th with cough ; another on the 18th ; and one lately entered, who complained last night. The patient of the 11th with sore throat ; and the supernumerary of the 15th with cough are recovered. The patient sent the 3d to the hospital with inflammation, was sent back last night for irregularity. Eleven on the sick list. The ship was washed, against my inclination ; because though fires were lighted afterwards between decks, they cannot at this season dry the ship thoroughly. Nine p. m. there was an alarm of fire ashore, but it was soon extinguished. When the thermometer was at 52, there was a fire in the gun-room.

Time.	Thermo- meter.	Latitude, d. p. or f.	Longi- tude in, m. or o.	Moon.	Winds.	Rain or Dew.	Atmo- sphere.
Jan. 22	46			14	N v *		cl.
23	45			15	V *	s	h.
24	48 $\frac{1}{2}$			16	V *****	..	cl.
25	52 $\frac{1}{2}$			17	W v *		cl.
26	52			18	NE v *		cl.
27	50 $\frac{1}{2}$			19	V *		cl.
28	48*			20	NE *		cl.
29	47 $\frac{1}{2}$	New York		21	NE v *	s	h.

STATE of the SICK LIST, &c.

22. Three who were returned from the hospital on the 20th, are again added with fever; and two other men complained. Sixteen sick. The supernumerary is recovered. The distinction between the ship's company and supernumeraries will be no longer observed. Fires were lighted in the hatchways, and some *sp. salis* evaporated between decks*. The ship's company employed in washing their clothes.
23. The scalded patient of the 5th is well; and the scorbutic patient of the 20th is sent to the hospital-ship. One complained of cough, and a drunken fellow of fever. Sixteen patients. The men employed as yesterday. We lighted fires to air the ship.
24. Yesterday's fever patient is well. One, who lately had cough, complained of fever. Sixteen ill. A very dirty and bad day.
25. Two complained last night of fever; one of whom had cough. Eighteen men in the list.
26. The patient added the 23d with cough, does duty. One added with cough; and one with fever. Nineteen sick.
27. One rheumatic patient, who returned from the hospital, was added to the list. Twenty in it. Last night there was a false alarm of fire on shore.
28. The one added on the 24th with fever is recovered, but has scalded his wrist; and one complained of excoriation. Twenty-one patients.
29. A patient who returned from the hospital on the 20th, and complained the 22d, of fever; and one of his messmates who was infected by him, and complained on the 25th were sent to the hospital. Both these men, I believe, have been irregular. The patient added the 26th was also sent to the hospital. One added the 15th with contusion, and yesterday's scalded patient, are recovered. One added with indigestion; one with inflammation; and one complained of chilblains. Eighteen ill.

* This was recommended by Mr. Chaloner, surgeon of the Commander in Chief's ship.

Time.	Thermo- meter.	Latitude, d. p. or r.	Longi- tude in, m. or o.	Moon.	Winds.	Rain or Dew.	Atmo- sphere.
Jan. 30	46 $\frac{1}{2}$			22	NW NNW **	s	cl.
31	47			23	NW v		ch.
Feb. 1 Die Sat.	46 $\frac{1}{2}$			24	W *		c.
2	50 $\frac{1}{2}$	s. & a. bet. L. Island and New York		25	SW *		cl.
3	47	s.		26	NW *		c.

STATE of the SICK LIST, &c.

30. The carpenter, who was added the 20th, recovered. One complained of contusion; and one of head-ach, who is not on the list. Eighteen patients.
31. The patient added the 26th with cough, had the fever, and is discharged. One added with fever. Eighteen sick; viz. four with fever; three with rheumatism; one with scurvy; seized with indigestion; two with inflammation; three with contusion; one with furuncle; one with excoriation; one with chilblains; one with ulcer; and one weak patient; besides one with head-ach. The ship was haled into the stream, and 54 prisoners were sent on board of us from a prison ship.
1. The contused patient of the 30th is discharged. Three marines, one of them with inflammation; and one seaman who attended the sick complained last night of fever. The other patient of the 30th is recovered. One complained of fever this morning. Twenty-one in the list.
2. The contused patient of the 2d ult. had the fever, and is recovered; and the marine with inflammation, added yesterday with fever is recovered; as also the one with chilblains. One, who was sent the 29th ult. to the hospital, died there last night. One of his messmates, upon hearing of his death, complained immediately of fever. Four returned from the hospital last night; one of them who is very weak, and has febricula, is added to the list. One complained yesterday of old rheumatism. Twenty-two in the list. Sailed and anchored p. m. near Hell-gates*.
3. The patient with inflammation, of the 21st; one with inflammation, of the 29th ult.; one of the marines added the 1st; and yesterday's frightened patient recovered. One complained of relapse of fever; and another of cough, who was at the hospital. Twenty patients. Sailed through Hell-gates.

* A narrow passage between the Continent and Long Island; called by that name.

Time.	Thermo- meter.	Latitude, d. p. or r.	Longi- tude in, m. or o.	Moon.	Winds.	Rain or Dew.	Atmo- sphere.
Feb. 4	42 $\frac{1}{2}$	41° 08" p.m. a. off Gardiner's Island.		27	N v * —	f	c.
5	47	s.&p.m. a. Rhode Island.		28	S v **		h.
6	39			29	NW **	f	c.
7	39			n.	NW ***	f'	c.
8	43			1	SE **	. f	cl.
9	47			2	NW ***		c.

STATE of the SICK LIST, &c.

4. Two marines complained of cough ; one of rheumatism ; one of strain ; and one of ulcer. Twenty-five sick. P.m. we anchored off Gardener's Island.
5. The frightened patient relapsed again last night ; the officer of marines ; and the gunner complained of fever ; and one of scurvy. Twenty-nine ill. P.m. we anchored at Rhode Island. Sir Peter Parker commands *.
6. One of those added the 22d ult. ; and the seaman of the 1st with fever are recovered ; as also one added the 4th with strain. Five complained last night of fever ; one is the officer of marines' son, who got it by sleeping with his father ; and another of them caught it from a sick mess-mate. Thirty-one in the list. The patient added the 29th ult. with indigestion is very ill of scurvy ; a singular case. The spruce beer is out. Grog was served to the ship's company.
7. One added the 30th ult. ; and one of those added yesterday recovered of fever. Two complained last night of fever. Thirty-one in the list.
8. The other marine, added the 1st with fever ; one added the 4th with rheumatism ; the frightened patient of the 5th ; and two of those added the 6th are recovered. One admitted with scald ; and another with contusion. Twenty-eight sick. All the prisoners except nine, who were English and Irish, six of whom are very ill of the scurvy, were sent on board a cartel.
9. One of the hospital patients, added the 22d ult. ; one the 3d with cough ; one the 4th ; and one the 6th recovered. Two complained of fever ; one of belly-ach ; and the six men added with scurvy. P.m. sent one man who was very ill of scurvy, and two of the remaining six to sick quarters. Thirty patients.

* One of the prisoners died on the passage from New-York to this place. I knew nothing of his illness until he was at the point of death. A fresh infection was brought on board by the prisoners.

Time.	Thermo- meter.	Latitude, d. p. or r.	Longi- tude in, m. or o.	Moon.	Winds.	Rain or Dew.	Atmo- sphere.
Feb. 10	46 $\frac{1}{2}$			3	SW **		ch.
11	43			4	v f SE NE ***	.. s f	ch.
12	40			5	WNW ***		cl.
13	34	s.		6	E v *	f	c.
14	39 $\frac{1}{2}$	Off Long Island.		7	v NNE **	s	cl.
15	38	p. m. a. Block Island.		8	v NW **	f	cl.

STATE of the SICK LIST, &c.

10. The patient of the 27th ult. ; and one added the 6th are recovered. Two added with fever ; one of them had it twice before and relapsed last night ; the other is a marine. Thirty in the sick list. A pretence is made, whence it originates I know not, that more of our sick cannot be accommodated at sick quarters ashore, though in fact they are not half full. Very bad weather.
11. Two added with fever last night, one of them, a marine, has had it four times ; and one added this morning with fever ; one with scurvy, and one with rupture. Thirty-five patients ; five of them marines, got cold by lying under the half-deck while the prisoners were on board. P. m. I was obliged to remove my thermometer to my cabin. An exceeding stormy day. A goat, which will make them four dinners, was killed for the sick.
12. The gunner added the 4th ; one added the 9th ; and one yesterday all fever patients ; and yesterday's patient with rupture are recovered. Three added with fever, one of whom is often ill, and one with rheumatism. Thirty-five sick.
13. One added the 13th ult. with fever, who had also an obstinate swelling on the left side of his head ; one added the 9th ; one the 11th ; and one yesterday, all fever patients, recovered. One added with fever ; one with nephritic symptoms ; and a third with habitual chronic rheumatism. Thirty-four patients. We sailed on a cruise.
14. The one added the 10th with fever is recovered. Five added with fever, of whom three have cough. Thirty-eight sick. The sick-berth is changed from a midships to the starboard side of the main hatchway, and is cleaned and smoked as often as the weather permits. The starboard bay, where the prisoners were confined, though it has been well cleaned, and smoked with gunpowder, still retains a very disagreeable smell.
15. One of those added the 12th, is well. One complained of contusion and fever last night ; the man who had excoriations is seized with the fever. Thirty-eight ill. P. m. we anchored at Block Island.

Time.	Thermo- meter.	Latitude, d. p. or r.	Longi- tude in, m. or o.	Moon.	Winds.	Rain or Dew.	Atmo- sphere.
Feb. 16	39 $\frac{1}{2}$	a. m. s.		9	WNW v **	f	cl.
17	43 $\frac{1}{2}$	Cruising.		10	NW *	s	h.
18	42 $\frac{1}{2}$			11	NW **	s	cl.
19	35			12	f N t NW *	f	c.
20	29 $\frac{1}{2}$	Block Isl. p. m. a.		13	NW **	f	c.
21	29	a. m. s.		14	NW * —	f	
22	38	Cruising.		p.	NNW v *	s	ch.

STATE of the SICK LIST, &c.

16. The patient with nephritic symptoms, added the 13th, is well. Two added with cough. Thirty-seven patients. We sailed again.
17. The patient added on the 10th of November with ulcer; and one of the fever patients added the 12th are well. Two added with the relapse of fever, one is a marine. Thirty-seven patients. The captain gave a sheep to the sick.
18. The patient added the 7th; and one the 16th recovered. One added with frost-bit toes; and an old rheumatic patient with fever. Thirty-seven ill. The sick-berth cleaned as often as the weather will permit.
19. One of the marines added the 4th; one the 5th; and another the 11th with scurvy; and one the 17th are recovered. Six added with fever. Thirty-nine sick. We got some oranges and limes out of a prize sloop from Hispaniola, for the use of the sick.
20. The other marine added the 4th; and one of yesterday's patients are recovered. Three added with cough and sore throat; and one with scald. Forty-one sick. P.m. very cold. Anchored at Block Island.
21. Two of the fever patients added the 14th; one of them a marine; the other marine added the 17th; and one of them added yesterday are recovered. The patient with ulcer, who recovered the 17th, cut his leg again by getting drunk yesterday, and the wound has become a bad ulcer. One complained of scorbutic symptoms; and another of exco-riation. Forty patients. Last night was by much the coldest we have had during the winter. In my cabin, in the cock-pit, the thermometer was 26. We sailed a.m.
22. The patient admitted the 3d; the scalded man admitted the 18th; the marine the 10th; the one with rheumatism on the 2d; one of those the 16th; one the 19th; and two with cough on the 20th recovered. Two complained of fever. Thirty-four in the sick list.

Time.	Thermo- meter.	Latitude, d. p. or r.	Longi- tude in, m. or o.	Moon.	Winds.	Rain or Dew.	Atmo- sphere.
Feb. 23	41 $\frac{1}{2}$			16	NNE v **	s	h.
24	44	39° 50"	00° 09" E	17	v E ***	. . s	ch.
25	42 $\frac{1}{2}$	39° 27"	00° 50" W	18	NNW ***	. s	cl.
26	44	39° 51"	00° 25" W	19	WNW **		c.
27	43			20	WSW v *		ch.

STATE of the SICK LIST, &c.

23. One added the 14th; and one of yesterday's fever patients recovered. Three, one of them a boy, complained last night of fever; one of whom is recovered. One added with contusion; and one with excoriations. Thirty-seven patients.
24. The other patient added the 22d recovered. Two with fever, of whom one had several relapses, admitted. Thirty-eight sick in all; besides some with colds who do duty. Bad weather.
25. The patients added the 21st; and one of the fever patients on the 23d are well. One complained of the belly-ach; one of rheumatism; and two of contusion. Thirty-nine in the list; and a number ailing who do duty.
26. One with contusion; one with excoriations admitted 23d; and one of yesterday's contused patients recovered. Four complained of fever; and one of contusion. Forty-one patients. The ship was cleaned. P.m. one of them added the 19th died of fever. He is the 4th fever patient who has died. We spoke the *Orpheus* with a prize. I hear they have seventy on their sick list, chiefly with fevers; which they caught, it seems, from some prisoners whom they had on board. I have since been told by the surgeon, that they lost twelve or thirteen on board, and a good many at sick quarters by this fever. He did not use the bark.
27. One entered the 17th ult. with rheumatism; one added the 9th; the frequently-ailing marine of the 11th; one of the 24th; a contused patient of the 25th; and one of yesterday's fever patients recovered. One complained of fever, whose messmate had it lately; one of furuncle; and one of scald. Thirty-eight sick. Fires were lighted in the hatchways.

Time.	Thermo- meter.	Latitude, d. p. or r.	Longi- tude in, m. or o.	Moon.	Winds.	Rain or Dew.	Atmo- sphere.
Feb. 28	38	40° 20"		21	NW v *	f	ch.
Mar. 1 Die Sat.	38 $\frac{1}{2}$			22	NWbN v ***	s	f.
2	34 $\frac{1}{2}$			23	NE v **	s	ch.
3	36	40° 42"		24	V **	f	c.
4	47	p. m. a. Block Isl.		25	f WSW t SWbS **	s	ch.
5	36	s.		26	WNW v **	f	ch.

STATE of the SICK LIST, &c.

28. The patient added the 9th with belly-ach; one added the 19th; and one on the 26th with contusion recovered. Two added with fever; and one with inflammation. Thirty-eight patients; viz. Sixteen with fever; seven with scurvy; three with rheumatism; one with bad cough; one with belly-ach; one with ear-ach; one frost-bit patient; one with excoriation; one wounded; one with inflammation; and two with furuncle; besides the three added to-day.
1. One of those added the 19th; one with belly-ach the 25th; and one fever patient on the 26th ult. recovered. Four complained of fever—one of them is a case of relapse; and two of the rheumatism, who are subject to it. Forty-one in the list.
 2. One who had furuncle, and was seized the 1st. ult. with a fever, recovered. One complained of fever. Forty-one sick. One of the scorbutic patients, who was a prisoner, has severe frost-bit toes, but did not complain of them before.
 3. One of the marines admitted the 4th; one of the fever patients the 26th; the two furuncle patients; and two of the fever patients added the 1st recovered. One complained last night of fever; one of diabetes; one of contusion; and one of ulcer. Thirty-nine patients. We spoke with the Orpheus, whose people are still very sickly.
 4. The patient entered the second, who came from the hospital; and one with inflammation on the 28th, are discharged. Three complained of fever; one of scorbutic symptoms, and one of the furuncle patients returned to duty yesterday relapsed, making forty-two ill. P. m. we anchored at Block-Island.
 5. One of those added the 22d of January; who had been at the hospital, and has had several relapses since; one added the 2d; one with the diabetes the 3d; and one of those who were added yesterday with fever recovered. One complained of fever. Thirty-nine sick. P. m. the Orpheus went into Rhode-Island. The inhabitants of Block-Island brought off a little fresh stock, potatoes, beet roots, and eggs.

Time.	Thermo- meter.	Latitude, d. p. or r.	Longi- tude in, m. or o.	Moon.	Winds.	Rain or Dew.	Atmo- sphere.
Mar. 6	41 $\frac{1}{2}$	Cruising.		27	E v ***	. . s	h.
7	44 $\frac{1}{2}$			28	N v **	. . s	h.
8	46			29	V *		h.
9	48			n. m.	f SSW t SSE *	.	h.
10	47			2	WSW *		c.
11	47			3	v SSW *		c.

STATE of the SICK LIST, &c.

6. One of the patients added the 19th ult.; and one of yesterday's recovered. One complained of inflammation. Thirty-eight patients. P.m. we stood towards Rhode Island to get a bullock, some fowls and potatoes. Every thing very dear.
7. One who messes with two fever patients was seized with it; and one complained of contused knee. Forty ill. The Captain ordered fresh broth for fifteen of the worst of the sick people, who could use it; and the purser served a number of the sick with fresh beef in lieu of grog, which I had stopped.
8. One of the scorbutic patients added the 9th; one of the fever patients admitted the 28th ult.; one of the 4th; and the turnicle patient recovered. Five complained of fever. Forty-one patients. The Captain ordered broth for the sick.
9. One of the scorbutic patients added Jan. 18th with fever; the three rheumatic patients, one of Jan. 26th, and the other two of the 1st inst.; one of those added the 5th, the other the 27th ult. with fever; one of the fever patients of the 1st; and one of the 4th, are recovered. One complained of bad cough; and one of fever who has been ill five days, and came out of the prize West India sloop. Thirty-five sick.
10. One of the scorbutic patients of the 9th; one added the 22d with fever; one the 27th ult. with scald; and one the 3d with contusion recovered. One complained last night of fever; and another of scorbutic swelled ancle, to which he is subject. Thirty-three in the list.
11. The patient added the 1st; one the 8th with fever; and one of the 9th with bad cough are recovered. One complained of fever; one of giddiness; and one of ear-ach. Thirty-three ill.

Time.	Thermo- meter.	Latitude, d. p. or r.	Longi- tude in, m. or e.	Moon.	Winds.	Rain or Dew.	Atmo- sphere.
Mar. 12	47 $\frac{1}{2}$			4	f SSE t SWbW **	.	f.
13	49			5	f NNE t NWbW **	.	ch.
14	47	Rhode Isl. p. m. a.		6	NW v **		c.
15	47			7	SW **		h.
16	48 $\frac{1}{2}$			8	SW v **		h.
17	49	a. m. s. p. m. a. Block Isl.		9	Wly **		c.

STATE of the SICK - IST, &c.

12. A marine who has been frequently ill before, and was added the 24th ult. with fever; the fever patient of the 7th; and yesterday's patient with giddiness are recovered. One complained last night of fever. Thirty-one sick. P. m. the prisoner added the 9th died highly delirious. He had been ill of fever before on board the sloop, and had relapsed five days before he complained to me. This is the 5th patient who has died of fever. Petechiæ are very common among the fever patients.
13. The patient added the 6th; the scorbutic one the 10th; and one with ear-ach the 11th are recovered. A marine added with foul ulcer. Twenty-eight patients.
14. A patient of the 14th ult. who has been scorbutic since he recovered of fever; and one added the 8th are well. One complained last night of fever; one had return of bad cough; and another, subject to rheumatism, is added with scurvy. Nineteen sick; besides two frost-bit and one ulcered prisoners brought out of a prize. A quantity of onions were brought from the prize, and served to the ship's company. P. m. we anchored at Rhode-Island; and sent seven men to sick quarters; viz. one with bad cough; one old rheumatic patient; three scorbutic men, one of whom was frost-bitten; a boy added the 8th with fever; and the patient with excoriations.
15. The patient added the 12th is recovered. One who attends the sick complained of fever, and is frequently infected. Twenty-two in the list. The prisoners were sent on board the Chatham.
16. The fever patient of the 11th recovered. One added with fever. He lately came from sick quarters; where he had been sent from one of the prizes for fever. Twenty-two sick. The Greyhound and Orpheus went up the river.
17. The rheumatic patient added the 25th ult.; and one the 15th, from attending the sick recovered. Two complained of fever. Twenty-two in the list. We sailed in company with the Lark, and anchored p. m. at Block-Island.

Time.	Thermo- meter.	Latitude, d. p. or r.	Longi- tude in, m. or o.	Moon.	Winds.	Rain or Dew.	Atmo- sphere.
Mar. 18	47	a. m. s. Long Isl. p. m. a.		10	WSW **		c.
19	47	Plum Isl. a. a. m.		11	Wly *		c.
20	48	Sheller Isl. s. a. m. & a.		12	Ely ***	...	f.
21	48 $\frac{1}{2}$			13	Wly **		c.
22	48			14	f WbN t SW **		c.
23	47			p.	Wly **		c.
24	47			16	f SW t NW *		cl.

STATE of the SICK LIST, &c.

18. One added the 19th ult.; and one of yesterday's patients are recovered. Twenty patients. A. m. we sailed, and p. m. we run a sloop ashore; the Lark stood in pretty near to her, and we followed. Both ships fired a considerable time at her and at two guns, which the rebels fired from at us, without hurting either of our ships. But one of our men, by ramming home a wad and cartridge before the gun was sponged, had both his hands blown off, his arms broke and much lacerated, and his face greatly burnt. Both arms were necessarily amputated above the elbows. The fever patient, who complained the 14th, addicted to drinking, died p. m. He is the 6th who died of fever.
19. The frost-bit patient added the 14th, and one of the fever patients of the 28th ult. recovered. One complained yesterday of head-ach; and another this morning of fever. Twenty ill. The sick-berth is cleaned and smoked every good day. We anchored off Plum-Island.
20. One complained of rheumatism; two of scurvy; and one of ear-ach. Twenty-four sick. We anchored a. m. at Shelter-Island.
21. One complained last night of fever. Twenty-five patients. Employed wooding and watering the ship. No stock to be got worthy of notice.
22. The fever patient of the 7th; one of the 8th; one of the 17th; two of the 19th; one with rheumatism; and another with ear-ach of the 20th recovered. One, who had bad cough, complained of fever. Twenty-one in the sick list.
23. The man who lost his arms died this morning; and one of the scorbutic patients of the 20th recovered. One complained last night of fever. Twenty ill.
24. One added the 14th ult.; and one of the fever patients of the 22d recovered. A black complained of fever last night; one man this morning; and one of contusion; making twenty-one sick.

Time.	Thermo- meter.	Latitude, d. p. or r.	Longi- tude in, m. or o.	Moon.	Winds.	Rain or Dew.	Atmo- sphere.
Mar. 25	45 $\frac{1}{2}$			17	NW **		c.
26	41			18	NW **	f	c.
27	42 $\frac{1}{2}$	Rhode Isl. a. m. s. p. m. a		19	NW **		c.
28	35			20	NW **	f	c.
29	41			21	SW **	.	cl.
30	46 $\frac{1}{2}$	Off Pru- dence. s. & a.		22	SW *		ch.
31	48 $\frac{1}{2}$			23	NW v **	.	ch.

STATE of the SICK LIST, &c.

25. One complained last night of fever. Twenty-two sick ; five of them have very bad fever. The contused patient of the 25th is well.
26. Two were added with indigestion, from eating raw *clams* or *hêns* unwashed* last night. Several others complained from the same cause, who were not added to the list, having been relieved by vomits. Twenty-three in the sick list. Twenty-nine Americans made their escape in a small boat from Connecticut, and came on board of us, to be sent to New-York to enter as volunteers in one of the Royal American corps. After getting some victuals and drink, they were sent ashore to one of our foraging parties at Long Island. The Captain and the officers gave the sick two sheep.
27. The patients added yesterday are well. One added with fever, who had it very severely before ; and one with excoriation. Twenty-three patients. A. m. sailed, and p. m. arrived at Rhode-Island.
28. One added the 26th ult. ; one of the 21st ; one of the 22d ; and two of the 24th were sent to sick quarters with violent fever. Eighteen sick.
29. The patient of the 27th with fever is well. Seventeen ill.
30. One complained of frost-bit toes. Eighteen in the list. We sailed about six or seven miles up the harbour between Rhode-Island and Prudence, to relieve the Centurion.
31. The patient added the 16th is recovered. One complained of a scorbutic swelled leg. Eighteen sick. P. m. the supernumeraries, one was sick, were sent on board the Centurion. The seventeen sick are six with fever ; four with scurvy ; one with bad cough ; one with frost-bit toes ; one with scald ; one with excoriation ; and three with ulcer. Our boat rows guard in the night.

* A species of shell fish.

Time.	Thermo- meter.	Latitude, d. p. or r.	Longi- tude in, n. or o.	Moon.	Winds.	Rain or Dew.	Atmo- sphere.
Aprilis 1 Die Mar.	47			24	SW *		ch.
2	47			25	Nly *		c.
3	48 $\frac{1}{2}$			26	V *	..	f.
4	42			27	NW **	f	c.
5	42 $\frac{1}{2}$			28	NW SW **	f	c.
6	46 $\frac{1}{2}$			29	Sly **		c.
7	47 $\frac{1}{2}$			n.	SSW **		h.
8	49 $\frac{1}{2}$			1	SSW **		h.

STATE of the SICK LIST, &c.

1. The patient with cough; and another with excoriation are recovered. Yesterday's recovered patient is relapsed; and two other men added with fever *relapses*. Eighteen sick.
2. The fever patient of the 23d; and one with frost-bit toes of the 30th ult. are recovered. Sixteen patients. We began to dig a garden yesterday on the island of Prudence, and to sow some seeds. No inhabitants on it.
3. The patient added the 8th of February with contusion, and seized the 11th ult. with fever; and one of those added the 1st are recovered. A marine complained of relapse of fever last night. Fifteen ill. One of our men sent from a prize to sick quarters with fever. The Centurion sailed down to Newport.
4. One of the ulcer patients, who was added the 21st ult. with wound; another of the 1st; and yesterday's patient are recovered. One added to the list with fever. Thirteen ill.
5. The man added the 20th of February with scald, is recovered. Twelve sick.
6. Two, one of them a marine, complained of fever; both of whom had it before. Fourteen in the list. The convalescents were sent ashore to walk, and the ship was washed.
7. No alteration of the sick list. I wanted to have a tent erected on shore for the sick, but the Captain would not consent to it. He allows the convalescents to go on shore to walk when the weather permits. Their mutton is all expended. They have portable soup with onions.
8. One of the patients added the 6th is recovered. Three added with fever; and one with inflammation. Seventeen sick.

Time.	Thermo- meter.	Latitude, d. p. or r.	Longi- tude in, m. or o.	Moon.	Winds.	Rain or Dew.	Atmo- sphere.
April 9	51			2	V *		h.
10	50 $\frac{1}{2}$			3	V * —	.	f.
11	51 $\frac{1}{2}$			4	NW v **	.	ch.
12	51 $\frac{1}{2}$			5	V *		c.
13	52			6	Sly **	..	cl.
14	55			7	*** NW		c.
15	46			8	NW *	f	c.
16	48 $\frac{1}{2}$			9	Sly *		h.
17	51 $\frac{1}{2}$			10	Nly *	.	h.

STATE of the SICK LIST, &c.

9. One of the scorbutic patients of the 20th; another of the 25th ult.; and one of yesterday's fever patients are recovered. One added with inflammation, from cutting his nail too close. Fifteen patients.
10. Two complained of fever; one of bad cough; and one of lethargic symptoms. Nineteen ill. A very wet fog.
11. The marine added the 13th ult.; and the relapsed patient of the first (formerly a supernumerary) are recovered. One who lately had the fever relapsed; and another with sore throat added. Nineteen patients. Some portable soup sent on board for the ship's company. I advised 4lb. of it to be dissolved every banian-day in the pease-soup.
12. The fever patients of the 8th; another fever; and the lethargic patient of the 10th; and yesterday's fever patient are recovered. Fifteen ill. The patient added the 10th with cough, is seized with fever. The people like their pease with the soup.
13. One patient of the 6th; a fever patient of the 8th; and two others of the 10th recovered. Twelve sick.
14. One complained last night of fever; one of head-ach; and one of inflammation. Fifteen in the list. One of the scorbutic patients seized with fever.
15. The patient of the 11th with sore throat is well. One complained last night of fever. Fifteen patients. I hear the men on board of other ships will not eat their pease with the portable soup. I suppose too much of it is boiled at once in the soups.
16. The patient added the 10th ult; and one of the 14th with head-ach are recovered. One complained of relapse of fever; and another of scorbutic symptoms. Fifteen sick.
17. One added the 2d; and one the 31st ult.; and yesterday's fever patient recovered. One complained of fever and inflammation. Thirteen ill.

Time.	Thermo- meter.	Latitude, d. p. or r.	Longi- tude in, m. or o.	Moon.	Winds.	Rain or Dew.	Atmo- sphere.
April 18	52			11	V **	.	f.
19	52			12	E v *	.	f.
20	51 $\frac{1}{2}$			13	NE **		f.
21	52			14	V *		f.
22	52			15	Sly *		f.
23	55			16	NE **		h.
24	55			17	Nly **		h.
25	54			18	N **	.	h.
26	52			19	Sly *	.	h.
27	52			20	Nly v *	.	ch.
28	51			21	NW *		c.
29	48			22	V *		cl.
30	48			23	NW SW **		cl.

STATE of the SICK LIST, &c.

18. One, a boy, complained of fever last night; one of sore throat; and one of slight wound. Sixteen patients.
19. No alteration of the list. The patient of the 15th is very ill.
20. The one added the 10th with bad cough; and one of the 18th with slight wound recovered. Fourteen in the list.
21. No alteration.
22. The patient added on the 9th is well. Thirteen ill.
23. One complained of scorbutic symptoms last night. Fourteen patients.
24. Two added with fever. Sixteen sick. One of the patients added this day, has been ailing since he came from New-York hospital. P. m. the patient added the 15th died of fever. He is the 7th who has died of fever.
25. One of the 17th is well. One complained of scorbutic symptoms. Fifteen patients.
26. One complained of contused wound; and one of inflamed finger. Seventeen ill.
27. The fever patient of the 4th; and one the 23d are recovered. Two added with fever. Seventeen in the list.
28. No alteration.
29. Seventeen sick. I am informed that two more of our people were sent with fever, from the prize, to sick quarters.
30. Two fever patients sent to sick quarters. The patient added the 25th is well. One of the scorbutic men, a Black, an irregular fellow, returned from sick quarters, as bad as when he went, and is a patient. Fifteen patients; viz. five with fever; four with scurvy; one with sore throat; three with inflammation from different causes; one with contused wound; and one with ulcer.

Time.	Thermo- meter.	Latitude, d. p. or r.	Longi- tude in, m. or o.	Moon.	Winds.	Rain or Dew.	Atmo- sphere.
Mai 1 Die Jovis.	48			24	SE Nly ***	. .	cl.
2	47 $\frac{1}{2}$			25	NW **		c.
3	50			26	SW *		c.
4	53			27	Sly *	.	ch.
5	54			28	Nly v *	. .	ch.
6	55			29	Nly *		c.
7	53 $\frac{1}{2}$			n.	SE **	.	h.
8	54 $\frac{1}{2}$			1	Sly *		h.
9	54			2	NE *	. .	cl.
10	54			3	Nly *		cl.
11	53			4	V *	.	cl.
12	48			5	NW v **	.	ch.

STATE of the SICK LIST, &c.

1. The boy with scurvy, added the 2d of August ult. and afterwards at sick quarters in Halifax; the boy with ulcer of the 3d; one with fever on the 8th of March; one with inflammation on the 8th; and one the 27th ult. are recovered. Two complained of fever, one of whom had it lately; and one of rheumatism. Thirteen ill. Last night the gentleman who had charge of the prize went to sick quarters, and died this day of his fever *.
2. No alteration.
3. Thirteen patients.
4. Two added to the list; one is a marine, with fever. Fifteen sick.
5. One of those added the 6th; and another the 24th ult. are well. One complained of abscess. Fourteen ill.
6. One added the 16th with scorbutic symptoms; and one the 18th ult. with sore throat are recovered.
7. One added the 1st with fever is well. One added with fever and inflammation. Twelve patients.
8. No alteration.
9. The patient of the 5th is recovered. Eleven sick.
10. The boy added the 8th ult. though recovering, relapsed, and is sent to sick quarters. One added with a fever relapse. Eleven ill.
11. One complained of fever. Twelve in the list.
12. Two added with fever; one of whom has had several relapses. Fourteen patients.

* I never saw him during his illness, nor did my mates.

Time.	Thermo- meter.	Latitude, d. p. or r.	Longi- tude in, m. or o.	Moon.	Winds.	Rain or Dew.	Atmo- sphere.
Mai 13	48 $\frac{1}{2}$			6	NW **	h	cl.
14	50 $\frac{1}{2}$			7	SW **		c.
15	53			8	SW **		c.
16	55			9	Sly **	. .	ch.
17	55 $\frac{1}{2}$			10	Sly **	.	ch.
18	56 $\frac{1}{2}$			11	Sly *	.	cl.
19	58 $\frac{1}{2}$			12	Sly *	.	cl.
20	59			13	V *	.	cl.
21	58 $\frac{1}{2}$			14	V **		c.
22	57			p.	NW **		c.
23	58			16.	NW **		c.

STATE of the SICK LIST, &c.

13. The patient added the 11th; the two added yesterday; and the Black with scurvy were sent to sick quarters. Ten sick.
14. The other fever patient of the 1st is well. One complained of contusion. Ten ill.
15. A man who lay close to the sick berth complained of fever. Eleven in the list.
16. The other patient of the 27th ult.; and one of the 14th are recovered. Nine in the list.
17. The patient added the 10th is well. Eight patients. The ship is moved up the river more than a mile farther.
18. The rheumatic patient of the 1st is recovered. One added with fever. Eight sick.
19. No alteration in the list.—I applied to the Captain to cause oxylapathum, dandelion, tops of wild pease, &c. to be gathered, and boiled every banian-day among the ship's company's pease.
20. One complained of fever. Nine patients. Plenty of mint, mustard, sorrel, and lamb's quarter, as it is vulgarly called, to be gathered ashore, which are well cleaned, and boiled with the pease.
21. One complained of belly-ach, and one of tooth-ach. Eleven sick.
22. One complained of a very bad ulcer in his leg. Twelve patients. The men are very fond of their pease with the soup and vegetables.
23. The marine fever patient of the 4th sent to sick quarters; and one of the 21st are recovered. Nine in the list. These two days past the NW wind has burnt and withered every thing ashore amazingly. A hot day.

Time.	Thermo- meter.	Latitude, d. p. or r.	Longi- tude in, m. or o.	Moon.	Winds.	Rain or Dew.	Atmo- sphere.
Mai 24	60			17	Sly **		c.
25	59 $\frac{1}{2}$			18	Nly **		c.
26	59			19	Nly **		h.
27	54 $\frac{1}{2}$			20	NE ***		ch.
28	55 $\frac{1}{2}$			21	V **		c.
29	59 $\frac{1}{2}$	a.m. s. p.m. a.		22	Sly *	d	c.
30	59 $\frac{1}{2}$	s. & a.	-	23	Sly *		
31	63	New Port.		24	Sly * —		c.
Junii 1 Die Sabbati	64			25	Sly * —		c.

STATE of the SICK LIST, &c.

24. The patient with inflammation of the 26th ult. is recovered. Eight ill. Some sour croute sent on board for the ship's company. Half a pound to be served to each man, Tuesdays and Saturdays, to eat with their salt beef.
25. One complained of inflamed foot. Nine in the list.
26. Four added with fever, of whom two, one of them a boy had it before. Thirteen patients. Those added to day have all different symptoms.
27. The patient of the 15th recovered. One case of relapse admitted with fever. Thirteen in the list.
28. The patient of the 20th; one of the 25th; another of the 26th; and one added yesterday are recovered. One complained of sore throat, to which he is subject, and of furuncles. Ten sick. The northerly winds have done much mischief to the fruit-trees and vegetation, &c. on shore.
29. No alteration of the list. At noon, being relieved by the Diamond, we dropped down the harbour, and anchored.
30. The patient added the 14th ult. with inflammation; and one of the 18th are recovered. Seven on the list.
31. One of those added the 26th is well. Six in the list; viz. three with fever; one with wound; and two with ulcer. Anchored at New-Port. Some porter sent on board for the sick, from the agent victualler. Eight of our men brought on board from sick quarters.
1. The patient with wound, added the 26th of April; one added the 4th; and another the 26th ult. recovered. The patient with sore throat discharged. One complained of whitloe. Four in the list.

Time.	Thermo- meter.	Latitude, d. p. or r.	Longi- tude in, m. or o.	Moon.	Winds.	Rain or Dew.	Atmo- sphere.
Junii 2	63	p.m. s.		26	SW * —		ch.
3	62 $\frac{1}{2}$	40° 41"	00° 24" E made.	27	WSW **	1	f.
4	62 $\frac{1}{2}$	40° 05"	02° 04" E	28	NW v *		c.
5	59 $\frac{1}{2}$	41° 51"	02° 50"	n.	SW v **		c.
6	59	42° 55"	02° 31"	1	Wly **		c.
7	60	43° 28"		2	NNW v * —		ch.
8	60	42° 28"		3	V **		h.
9	60 $\frac{1}{2}$	42° 04" Off Cape Cod.		4	SE *	.	h.
10	60	42° 04"		5	SSE * —		ch.
11	62	Off Cape Cod.		6	Nly *		h.
12	61 $\frac{1}{2}$	42° 50"	00° 46" E made.	7	SE v **	.	f.

STATE of the SICK LIST, &c.

2. Two of the eight who came from the hospital the 31st ult. are added to the sick list with scorbutic symptoms. Six patients. Those who have had fever of late, have been seized with scorbutic symptoms, in their convalescent state. P. m. we sailed in company with the Amazon and Orpheus on a cruize, and the three ships' companies agreed *viva voce* to share prize-money.
3. One complained last night of fever. Seven sick. A very wet fog.
4. The patient added the 26th ult. is recovered. Two added last night with fever. Eight in the list.
5. The patient added the 7th; another of the 22d ult; and one on the 1st are recovered. Five ill.
6. The patient of the 4th is recovered. Two, one of them came from a prize, complained last night of fever. Six in the list.
7. One of the patients added the 2d; and one of the 4th are recovered. One complained last night of hæmorrhage from the nose. Five patients.
8. The patient of the third; and one of the 5th recovered. One sick.
9. One added last night with contusion. Five ill. Caught a few fish.
10. The patient added the 8th recovered. One complained of fever. Five patients. Caught some fish. Very wet fogs.
11. The hæmorrhage patient of the 7th is recovered. Four ill. We caught a few fish.
12. The patient of the 9th is well. One with wound; one with contusion last night; and one with scorbutic blotches, and formerly sent very ill of scurvy to sick quarters, added to the list. Six sick.

Time.	Thermo- meter.	Latitude, d. p. or r.	Longi- tude in, m. or o.	• Moon.	Winds.	Rain or Dew.	Atmo- sphere.
Junii 13	59	42° 54"	01° 00"	8	NE v **		f.
14	59	Cruising.		9	V *		c.
15	61			10	Sly * —		ch.
16	62 $\frac{1}{2}$			11	SSW v * —	. . t l	f.
17	63 $\frac{1}{2}$			12	V * —	. t l	ch.
18	62 $\frac{1}{2}$	42° 14"		13	V **		ch.
19	62 $\frac{1}{2}$	42° 00"	00° 39" E	14	Nly v *		ch.
20	62	42° 00"	01° 12"	p.	Nly v *		ch.
21	63	42° 10"	00° 38"	16	Nly *		ch.
22	61 $\frac{1}{2}$	41° 17"		17	Ely v **		ch.
23	60	Cruising.		18	Sly ***	.	ch.
24	61	42° 02"		19	S **	.	ch.
25	63 $\frac{1}{2}$	42° 31"		20	WNW v *		h.

STATE of the SICK LIST, &c.

13. One added with wound; and a boy with relapse of fever. Eight in the list. Very wet fogs.
14. One complained of strain. Nine patients.
15. Last night a patient subject to epilepsy was seized with it; and one complained of fever. Eleven ill. We caught a few cod.
16. The other patient of the 6th; one of the 10th; the wounded patient of the 13th; and yesterday's fever patient recovered. A boy returned from sick quarters the 13th ult. relapsed with fever; one complained of indigestion, from eating fish; and two with slight wounds. Eleven in the list.
17. Yesterday's patient, with indigestion, recovered. Ten ill.
18. The wounded patient of the 12th; and the two of the 16th recovered so far as to do duty. Seven patients.
19. No alteration in the sick list.
20. No alteration.
21. The contused patient of the 12th; and the boy of the 16th recovered. Five remain on the list.
22. No alteration.
23. The epileptic patient has had fever and recovered. Four sick.
24. No alteration of the list. P. m. a squall of wind blew remarkably hot off the land.
25. Four in the list. We caught a number of mackerel.

Time.	Thermo- meter.	Latitude, d. p. or r.	Longi- tude in, m. or o.	Moon.	Winds.	Rain or Dew.	Atmo- sphere.
Junii 26	63 $\frac{1}{2}$	42° 26"		21	SW v *	1	h.
27	67	p. m. Cape Cod Bay.		22	Sly **		cl.
28	68 $\frac{1}{2}$	Cape Cod Harbour.		23	SSW *		h.
29	68			24	Sly v *		h.
30	68 $\frac{1}{2}$			25	Sly v * —		h.

STATE of the SICK LIST, &c.

26. The other patient added the 2d, and the patient of the 14th, recovered. A marine seized yesterday with fever. Three in the list.
27. The marine is recovered. One complained of ulcer. Three ill. The last of the people's portable soup is made use of. P.m. we anchored in Cape Cod Bay.
28. No alteration of the list. We moved and anchored in Cape Cod Harbour. Our water-casks were sent ashore to be filled, and a corporal with six marines from each ship were sent to guard the casks. A marine officer commanded them.
29. The scorbutic patient of the 12th is recovered. Two in the list. Some fishermen live about this place, from whom we get a few fish for the ship's company.
30. No alteration of the list. The two sick are, the boy who was added the 13th with fever; and another on the 27th with ulcer.

CHAPTER VII.

Monthly Review of the Sick List, from September 1, 1776, till June 30, 1777.

SEPTEMBER.

THE sick list varied little, but often, until the middle of the month, when it decreased: it afterwards increased, though slowly, until the 24th, then varied a little, and decreased the last day.

The patients who complained were, four with fever; two with head-ach; sixteen with dysentery; one with belly-ach; one with opothalmia; one with hæmorrhoids; one with eruption; one with tenea; three with strain; two with contusion; three with wound; one with swelling of the knee; and one with furuncle: in all 37.

OCTOBER.

The fever patient, a puny boy, who had been returned to duty the 19th only, after having been in the sick list above three weeks, complained again the 22d ult.; more particularly of head-ach; bad cough; and pain of his side for eight or ten days: which were followed by flux, and diabetes that prevented his recovery for many weeks.

The

The fever made its appearance the 15th Sept. the 3d day after we arrived at Halifax. A young man, who belonged to a boat, which had probably been on board the Lizard and ashore at Halifax, where infection was known afterwards to be, was affected with ague, of which he got soon well. But even before this man I found, on enquiry, that two other men had been affected with slight attacks of fever. Some dysenteric complaints intervened between the recovery of the boy and the man's being affected who belonged to the boat. Another man was seized the 22d with fever, and recovered the 26th. He was one of the long-boat's crew, and had been on board the Lizard. I was surprised to find the boy recover slowly, though I gave him the bark freely.

The ship's barber was the next person seized with fever. His attack was not violent, and being a tippling young lad, he went about the ship five or six days before he complained, lest his grog should have been stopped. He soon recovered.

Another young man, of a delicate constitution, complained the same day the barber did. He was very often ailing, but he luckily got quite well in a few days.

The next person seized with fever was a marine, who died the 8th day of his illness. He was much given to drinking, and frequently got intoxicated
with

with small beer ; was much bloated ; of an indolent disposition ; and not long before had been drinking to excess. I was much alarmed at seeing, on several parts of his body, a few hours after he died, large black blotches, particularly in those parts he had lain upon. None of the febrile symptoms were violent ; and from his naturally slothful disposition, I did not apprehend that he was in danger.

On this occasion, I was the more uneasy, because the symptoms of the other fever-patients were more obstinate than those which had appeared in former months. These circumstances convinced me that we had caught a virulent infection. I cannot, however, determine whether we caught it on board the *Lizard* ; or at St. John's ; or at Halifax ; as the fever prevailed, and we had communication at all the three places within a few days. One thing is certain, that wherever it was contracted, the debauch which our people committed on the 15th of September, soon roused it into violent action. From a very healthy state, we were suddenly plunged into a very sickly and dangerous one.

Thirty-nine complained of fever ; two of dysentery ; one of rheumatism ; two of hæmorrhoids ; one of eruption ; one of itch ; one of strain ; and three of contusion : 50 in all.

The method in which the fever was treated will be related in its proper place. None of the other complaints

plaints required any unusual treatment. Besides, it is my intention to confine my observations at present to fever.

NOVEMBER.

A good deal of care was taken to clean and smoke the ship in different ways, the 1st of this month, with larger fires of junk and tobacco, than were generally made use of afterwards. To this precaution alone can be attributed the visible check which was given to the fever: there being a decrease of no less than fifteen patients in the course of the month; and all who were in the list did well. The fact is so clear and incontestable, that nothing further need be said in favour of smoking with large fires for three or four hours at a time, but more especially with tobacco, when a ship becomes sickly; nor need I urge the propriety of frequently repeating this process, at least as often as circumstances will admit. The sick themselves not only found the air more cool and refreshing after smoking, but those in health, who lay in the cable tiers and more confined places of the ship, said, when they went to bed after the smoking, that 'it was like a change of climate, the air was so much more refreshing to them, so cool and agreeable was it thereby rendered.' But it is likewise to be remembered, that the sick were treated liberally with bark.

On the 26th, the sick, or rather convalescents, with all their clothes, were sent on shore at Hali-

fax, intentionally to get the ship cleared of the infection if possible. Indeed, no other motive could have justified sending people to such quarters. Of all the nests of filth combined with poverty, which I ever beheld, they appeared by far the most shameful. Where, or on whom this reproach falls, I know not; but what rendered it inexcusable was, that Halifax had never been molested by the rebels, consequently it by no means became necessary to coop up the sick and wounded seamen, in the most filthy and decayed house about town, with scarcely a square of glass in a window. As to their victualing, they were left to the mercy of an old woman and her daughter, who armed that part of the *dirty* business, for so I must call it*.

As soon as they were sent on shore, the ship was cleaned and smoked with all possible care; and we flattered ourselves that, by repetitions of this process, we should be able to subdue the infection entirely; but, to our great mortification, sixty supernumeraries were sent on board in the evening from the Rainbow, eight of whom had ship fever; and there was no time to get an order to send them back that night.

* I will do the commander in chief the justice to say, that I believe this was wholly unknown to him, or to his surgeon, who inspected the hospitals where the fleet lay; and it is to be remembered, that this happened in Nov. 1776, which was before Mr. Haleburton went to Halifax.

Besides the eight supernumeraries, who were sent back to the Rainbow next day, 24 were added to the list this month with fever; one with scurvy; two with rheumatism; three with cough; one with ear-ach; one with hæmorrhoids; three, with strain; six with contusion; two with wound; two with inflammation; and two with ulcer: in all 47.

I shall not mention at present the manner in which those men were treated.

DECEMBER.

Only five were added with fever the first week; one or more were added every day in the second week; and in the remaining part of the month, excepting the 15th, 19th, and 26th, one or more complained of it daily. But if the state of the weather, and the ship's being so much crowded on the passage from Halifax to New-York, is considered, it will be thought surprising that we had only one patient died, notwithstanding the almost daily increase of the sick list. On the last of November there were only 16 ill, including supernumeraries; and on the last of this month there were 35 bad. But the fever patients were then chiefly in a convalescent state, though they were liable to relapse from inattention, or the least irregularity: 49 fever patients, complained; besides one of dysentery; one of belly-ach; nine

of rheumatism; one of scrophula; one of cough; one of being frost-bitten; two of rupture; six of contusion; two of fracture; two of wound; two of inflammation; three of abscess; and one of ulcer: in all 83.

The symptoms of the fever were violent, and very obstinate; especially the delirium. It was incident to those who complained of rheumatism, and such patients required the restorative treatment more than evacuations. Other patients were treated after the usual manner.

The passage to New-York was extremely disagreeable from its tediousness; from the badness of the weather; the great number on board; and from our being so sickly. The patients being very badly accommodated in their berths, rendered it still worse. We sometimes had three different gales of wind within twenty-four hours.

JANUARY, 1777.

For the first nine days fever patients complained only on the 1st, 2d, and 5th. Through the remaining part of the month, some were admitted nearly every other day; and in order to get rid of the infection, were sent to the hospital soon after their admittance; besides great pains were taken to keep the ship clean. The men however were very irregular. The ship lying near a wharf, they had easy access to new rum on shore, which some prize

prize money they had received, enabled them to purchase. Whether the patient*, who died of fever the 14th, about thirty-nine hours after complaining, had drank any of that abominable new spirit, I am uncertain.

The patients added to the sick list were forty with fever; one with head-ach; one with dysentery; one with indigestion; seven with scurvy; five with rheumatism; two with fore throat; nine with cough; three with nephritic symptoms; one of being frost bitten; one with scald; six with contusion; one with inflammation; one with abscess; one with furuncle; and one with excoriation: in all 81.

It was observed that as the sick on board increased, the more patients complained daily. Did this proceed from many people being crowded into so small a space? Under such circumstances, does not infection daily acquire more virulence? Will not those men who necessarily pass and repass the sick-berth then, be more apt to be affected by the sight of the sick, as well as by the contagious effluvia? That the wet decks, and the men lying in wet hammacoes, occasioned by the leakiness of the decks, contributed thereto, no person can doubt.

FEBRUARY.

This was the most sickly month we had in Ame-

* His case will be related in its proper place.

rica ; a greater number of fever patients having complained than in any other month. Yet only one patient, a supernumerary, who came from the Rainbow, died.

Although the prisoners were on board only nine days, it cannot be doubted but that, by their crowding the ship, they increased the virulence of the contagious effluvia, and the number of the sick. One died on board, without my being informed of his illness, until within a few hours of his death. By the accounts I had of his case, he was in some measure starved from want of clothes, bedding, and attention. But as the prison ship from which they came on board was sickly (as I was well informed,) it is more than probable that he brought the infection with him on board of the Juno, where they were necessarily crowded into the starboard bay, and had a wet deck only to lie upon. Both bays were unavoidably wet by the cables ; and particularly the starboard had an offensive smell for a considerable time after the prisoners were sent away, though both were well cleaned and smoked. While these poor creatures were on board, our marines lay under the half-deck, neither wind nor water tight, where they caught cold, and were seized with fever.

The winds being, generally, Northerly, the weather was very cold, with snow. Every day, excepting the 4th, 8th, 16th, 20th, 21st, and 25th, fever

fever patients were added to the list: in all 61. Besides one with head-ach; two with belly-ach; nine with scurvy; five with rheumatism; three with fore throat; five with cough; one with nephritis; one frost bitten; three with scald; one with strain; two with rupture; six with contusion; one with inflammation; one with furuncle; two with excoriation; and two with ulcer: 106 in all.

Urgent cough, with severe head-ach, were the most frequent and troublesome symptoms of the fever this month. No fever patients were sent to sick quarters, but one from a prize, without my knowledge.

MARCH.

The number of sick were greatly diminished; but more than one half were fever patients; viz. 34. The other patients were, two with indigestion; six with scurvy; three with rheumatism; three with cough; two with ear-ach; one with giddiness; one with diabetes; four frost-bitten; three with contusion; one with wound; two with inflammation; one with furuncle; one with excoriation; and three with ulcer: in all 67. One of the fever patients died on the 12th; and another on the 18th. The former was the prisoner from the sloop, who had been so long ill before he complained. Irregular people suffered far more than others in the fever; the symptoms being more severe, and the relapses more frequent. But I ob-

served exceptions to this rule ; for under the disadvantages of irregularity, the utmost degree of slothfulness, filthiness, and nakedness, and of having a chest only to lie upon, without bedding, I have seen the sick recover : and what seemed rather extraordinary, the young, raw, dirty lads from Scotland, who had been but a short time at sea, were seldom seized with it.

The man who was blown up or wounded on the 18th, died on the 23d. It was some time, perhaps a quarter of an hour after the accident, before he recovered any motion or sense, or felt any considerable pain. He was delirious throughout the first night.

For the first five days, fever patients were daily added ; but on the 6th, 7th, 13th, 18th, 20th, 26th, 28th, 29th, 30th, and 31st, no fever patients complained, so that by far the greatest number were added before the 18th, after which the infection very obviously decreased. This could proceed from nothing else but our firing so much on the 18th* ; which not only smoked the ship thoroughly, but also the men and their clothes, which never could be done in the usual way. The fact, whatever conjectures may be formed on it, appears evident by the daily subsequent state of the sick list. Yet nothing but accidental circumstances can pro-

* See page 89.

cure such a thorough smoking, because the expences attending it cannot be allowed. It may therefore be said, that little advantage can be derived from this being known, unless it could be put in practice. One advantage, however, I think may arise from this being known; viz. that by performing their duty properly, the men will destroy the sickness on board of a sickly ship, when coming to action, which certainly operates as an additional excitement to them to perform their duty with becoming spirit, as this will be killing the enemy and the sickness at the same time. Three fever patients were sent to sick quarters on the 28th.

APRIL.

Northerly winds were most prevalent; and the weather was rather cold and unpleasant, though little rain fell. It was of some benefit to the convalescents that they were now and then allowed to walk on shore. But a good sick tent erected on shore, would have been of much more benefit, not only to the sick, but to the ship's company in general; as we might then with more ease have probably *smoked* out the infection entirely from on board.

The sick continued to decrease in number on the list; and the greatest number of the fever patients were added to it before the 19th; viz. on the 1st, 3d, 4th, 6th, 8th, 10th, 11th, 14th, 15th, 16th,

16th, 17th, 18th, 24th, and 27th. On the 24th, one that came, I believe, from the Rainbow, died. Two men* were sent from a prize to sick quarters with a fever; and two from the ship on the 30th. All the patients of this month were 27 with fever; one with phlethora; one with dysentery; four with scurvy; two with fore throat; one with cough; two with wound; and six with inflammation: in all 44.

The most obstinate symptoms of the fever this month, were head-ach; univerſal pains; and cough.

The delirium was very urgent in that case which proved fatal.

MAY.

We became, daily, more and more healthy. Only 28 patients complained the whole month; viz. 19 of fever; one of belly-ach; two of rheumatism; one of fore throat; one of contuſion; one of inflammation; one of abſceſs; one of furuncle; and one of ulcer.

The weather, though ſomewhat backward, was, upon the whole, temperate. The winds were moſtly between SE and NE. The NW wind on the 22d, 23d, and 28th, did much miſchief, as has been already obſerved.

* Neither thoſe men, nor any ſent from prizes, were under my care. They are only mentioned as men belonging to the ſhip, who had fever.

The

The symptoms of the fever were now much milder. The head-ach ; with pains in the limbs, as the patients expressed themselves, were most troublesome.

The gentleman went the 30th ult. from the prize to sick quarters, where he died the 1st inst. He had of late, I was informed, lived very irregularly, and was subject to complaints of his breast from a hurt which he formerly received. Five were sent this month with fever to sick quarters.

Our people, particularly those who were scorbutic, received benefit by walking on shore ; from the portable soup and greens being boiled among their pease ; and from the crout:

JUNE.

We had very little bad weather at sea this month, it being chiefly mild, but the atmosphere was in general very hazy or foggy. The ship's company caught a great many fish, and they had the portable soup as usual while it lasted, and four crout, twice a week. Under these circumstances the fever patients continued to decrease, to the great satisfaction of every person. Only twelve complained of fever ; one of indigestion ; three of scurvy ; one of hæmorrhage ; one of epilepsy ; one of strain ; two of contusion ; four of wound ; one of abscess ; and one of ulcer : 27 in all.

Head-ach was the most troublesome symptom among the fever patients.

CHAP.

CHAPTER VIII.

Monthly Review of the Sick List, from July 1, 1777, till July 30, 1778, with Meteorological Observations and remarkable Occurrences.

JULY.

THE winds were variable, blowing moderately from every point of the compass in the course of the month. It was very seldom calm; 5th, 9th, 17th, and 20th, light showers; and 22d, 23d, and 29th, showers; the atmosphere was generally hazy, foggy, or cloudy. On the 2d, 3d, and 4th, heavy dews: the rain was accompanied on the 5th, and 17th, with thunder and lightning; 22d, with lightning; and 29th, with thunder. Mean height of the thermometer about 65. New moon 4th; full moon 20th.

The sick list increased from three to nine in the course of the month. Seven were added to it with fever, of which the symptoms were become milder; one was added with head-ach; one with dysenteric symptoms; two with belly-ach; one with vomiting; three with indigestion; six with scurvy; two with rheumatism; one with hypochondriasis; one with worms (*ascarides*); one with eruption; two with strain; one with hydrocele;

cele; one with contusion; three with inflammation; and one with ulcer: in all 34.

On the 26th, a cask of molasses was taken out of a prize for each of the three ships companies, and eight casks of limes were divided among them. The *Orpheus* had one half of the limes, as her people were the most sickly with fever and scurvy. I got 18 bottles of small French wine for the use of the sick.

On the 28th, I ordered three gallons of lime juice and six of molasses to be mixed with 18 gallons of rum; but, by mistake, the steward put in more rum. This was to be served to the scorbutic people, diluted with water, in the room of grog.

On the 31st, we got a little stock-out of a prize, which was divided among the three ships.

The porter was served out to the ship's company, as a free gift, a pint a day to each man.— A prisoner, who came from the molasses vessel, complained of inflamed eye. He said it proceeded from the steam of the molasses, when starting it out of one cask into another about a fortnight before; and that all the men who were employed about that business, were affected in the same manner.

One of our fever patients died the 25th, at sick quarters.

AUGUST.

The wind was variable and very moderate, but
more

more from the S. than from any other quarter, till the 26th, when it came Northerly, and continued so; but was still moderate until the 31st. It rained the 2d and 15th, with thunder and lightning; 3d, 17th, 18th, 19th, 20th, and 27th, light showers; 5th, and 26th, showers; 10th, 11th, 12th, 13th, 14th, and 23d, lightning. The atmosphere in general was hazy and cloudy, but the 6th, 7th, and 8th foggy. New moon the 3d, and full moon 18th. The thermometer was never lower than 68; nor higher than 78.

The sick list varied little, but continued to increase until the 12th. On the 13th, we arrived at Rhode-Island; the people of the *Orpheus* continued sickly all the voyage. The dysentery began now to attack the people. I sent to sick quarters on the 14th, one with fever; three with flux; one with bad cough; and three with scurvy. From the 14th the list varied frequently until the end of the month. On the 28th one with dysentery; one with vomica; and one with hydrocele were sent to sick quarters. A third part of the ship's company were sent in their turns on shore, to walk and gather apples, when the ship's duty and the weather permitted. On the 15th we anchored up the harbour off Prudence.

The patients who complained were nine of fever; one of pleurisy; five of dysentery; one of vomiting; one of indigestion; three of scurvy;
one

one of rheumatism; one of hypochondriasis; one of vomica; one of cough; one of eruption; one of strain; two of contusion; two of inflammation; one of abscess; one of furuncle; and one of ulcer: 33 in all.

There were no unusual symptoms either among the fever or dysenteric patients.

SEPTEMBER.

Northerly and NE winds were most prevalent. Some days they were variable, but it was seldom calm, and always moderate. 6th, 7th, 10th, 19th, 22d, and 26th, light showers; 17th, and 23d, showers; 18th, hard showers; 21st, thunder. The atmosphere was generally cloudy, sometimes clear, and very seldom hazy. New moon the 1st, and full moon the 17th. The mean height of the thermometer was about 66.

The sick list varied little; but rather increased all the month with dysenteric patients, one of whom died on the 19th. Fever with petechiæ accompanied this case. Nothing uncommon happened in the dysentery. On the 4th, about 200 rebels attacked our watering party, consisting of a midshipman, the cooper, and boats crew, with a corporal and six marines; and wounded the corporal and two of the marines. On the 12th, a man was killed by a fall from the main-top.

Five patients were added with fever; fifteen
with

with dysentery; one with fore throat; five with contusion; two with wound; and two with furuncle: 30 in all. On the 14th, one of the fever patients was sent to sick quarters.

OCTOBER.

Northerly winds prevailed more than the Southerly.—1st, 2d, 25th, and 26th, calms which did not last throughout the day; but for the most part the wind was moderate; and sometimes variable. On the 18th, 27th, 28th, and 29th, gales of wind; 9th, showers; 13th, 18th, 21st, 24th, 25th, 26th, 27th, and 26th, light showers; 28th, heavy rain. The atmosphere was generally hazy or cloudy: new and full moon on the 1st, full moon 15th. The mean height of the thermometer was about 60. From the 22d to the end, the weather became cold.

The dysentery still prevailed, and the sick list rather increased all the month. On the 1st, four were sent to sick quarters with dysentery; and one with fever; two, with dysentery, were sent to sick quarters the 10th, and one died of flux. The dysentery was very obstinate, but nothing unusual occurred among the fever patients, Nine were added with fever; fourteen with dysentery; one with cholera morbus; two with rheumatism; one with fore throat; three with contusion; one with inflammation; and one with abscess: 32 in all.

NOVEMBER,

NOVEMBER.

For the first four or five days the wind was Southerly and Westerly, though it froze on the 1st and then came round to the Northward, varying with rain, but fixed for two days in the NW with fresh gales. It blew Southerly again for one day, then returned to the N and NW for three days with rain; again veered for a short time to the SW, and gradually came back to the WNW, W, and NW, for ten days, with frost and some snow, blowing strong at times. From the SW it blew fresh one day, varied; became Northerly, then Southerly and Westerly—again—NW variable and Easterly, with strong gales. The 12th, 13th, 17th, and 18th, gales; 29th, strong gales; 22d and 23d, short calms; 6th, heavy rain; 5th, 8th, 9th, 10th, 22d, 26th, 29th, 30th, light showers. The atmosphere was generally cloudy or hazy. The moon was full the 14th; and changed the 29th. The mean height of the thermometer was about 46.

On the 18th we dropped down to Newport; and failed the 23d with a convoy; but returned next day. 27th we again failed, and anchored at Block-Island p. m. We failed the 28th, towards Sandy-Hook, with a convoy; which were all dispersed by the gale of wind on the 29th. The Diamond, Flora, and Lark, were out on a cruize, and their men be-

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came very sickly from the bad weather, and from infection brought on board by the prisoners taken out of the prizes. The small-pox was on board the Lark.

An agreeable change in the health of our men took place ; for this was the healthiest month we enjoyed while the Juno was employed in America, twenty-one patients only having complained ; viz. one of fever ; one of head-ach ; two of dysentery ; one of rheumatism ; one of palpitation of the heart ; one of cough ; two of scald ; six of contusion ; two of wound ; three of inflammation ; and one of furuncle.

Two with rheumatism ; and one with scald head were sent to sick quarters on the 19th ; and one on the 26th with fever.

The sick list varied little, but towards the end of the month it was increased by hurt patients. Our men were very seldom on shore, and only when we first went up to Prudence ; the weather was far colder in February last than it was this month. On the 21st, six of our men, who had been taken prisoners the 4th of Sept. returned in a flag of truce ; and another escaped out of prison. When they came on board, I got them well washed, first with warm water, then with warm vinegar ; and afterwards put clean clothes on them. I gave each of them an ounce of Huxham's *tinct. of bark*, and gr. $\frac{1}{4}$ of *tartar emetic* in a little water.

DECEMBER.

DECEMBER.

The wind was chiefly from WSW to NE ; and, unless in the beginning of the month, when it blew strong gales, was generally moderate. The 2d, 13th, 15th, 17th, 18th, 27th, light showers; 29th, gales, with light showers. We had only nine days without frost, and snow fell on four days only. The atmosphere was oftener cloudy and hazy than quite clear. Full moon the 14th ; new moon the 29th : it was very cold about the end of the month. The mean height of the thermometer was about 44.

We returned to New-Port the 7th. Our sick list increased until the 19th ; the week following it decreased ; and from the 27th until the end of the month increased. A fever patient was sent to sick quarters the 12th ; another fever, and one dysenteric patient, the 27th. Query, Did the increase of fever and dysenteric patients proceed from the blowing weather at the end of the last, and beginning of this month ? our hatches being then battened down. On the morning of the 30th, every thing on board which the wind blew upon, had the appearance of being cased over with ice, it having rained, hailed, snowed, and froze in the night. The ship's decks were very leaky ; many of the men were wet in their hammocks ; and a great deal of water was between decks. Most of

the fever patients were lying in the bays, where the air is much confined. The man who first complained of the fever this month, was delirious when I was called to him.

The number of patients added to the sick list this month were ten with fever; four with dysentery; six with rheumatism; five with cough; one with ear-ach; one with hernia; three with contusion; and two with furuncle: 32 in all.

The *Nonfuch*, *Raifonable*, and *Somerfet* were very sickly. The *Nonfuch* left England in March only, and fifty of her men had already been carried off by fever. Each of these ships had now between 130 and 150 men on their sick list. The fever prevailed on board the *Somerfet*, and the other two ships had far more scorbutic than fever patients. The fever and dysentery were prevalent to the Southward last campaign.

JANUARY, 1778.

The wind blew from between NW and SW more than from any other part of the compass. On the 8th, 17th, 18th, 21st, and 29th, we had generally fresh gales, but on the 7th, 27th, and 30th, calms for a short time. At the beginning of the month there was some frost, and a good deal between the 14th and 26th. The 3d, 8th, 10th, and 18th, light showers. The 11th, 17th, light showers with snow; 29th, and 31st, heavy rains; 5th, 20th,

20th, 24th, and 25th, snow. Full moon 14th; new moon 28th. The mean height of the thermometer was about 39. The atmosphere was chiefly hazy and cloudy.

The sick list decreased until the 8th—increased for two days—decreased until the 22d; and increased again until the end of the month. There were never more than twelve patients in it. In all, six complained of fever. Those who complained were, one of head-ach; one of dysentery; one of vomiting; five of rheumatism; one of sore throat; one of ophthalmia; one of contusion; one of fracture; one of wound; one of inflammation; one of abscess; and five with furuncle: 26 in all.

On the 2d we sailed to Long-Island; and on our return the 6th, the Eagle, with Lord Howe's flag on board of her, lay here. The Eagle was far from being healthy. We sailed the 7th; returned the 9th; and on the 20th went up and lay between Rhode-Island and Prudence: 31st we anchored at Prudence. Nothing particular happened among the sick this month,

FEBRUARY,

A moderate Westerly wind for the first five days was succeeded by a short calm. It came to the Eastward on the 6th, and blew violently on the morning of the 7th from NNE. with snow. Much

damage was done by the gale. It was then variable, but oftenest from NW. The 12th, 13th, 17th, 20th, and 21st, were calm. The atmosphere was sometimes clear; but generally cloudy or hazy; excepting the 11th and 27th, showers. The 16th, and 26th, light rain. It was generally frost from the 6th to the end of the month; and a good deal of snow fell. The moon was full the 11th; and changed the 26th. The mean height of the thermometer was 44.

On the 15th we sailed in company with the *Cerberus* and *Haerlem*, and 24 sail, chiefly of transports, all carrying flags of truce. Towards evening, our ship and the *Cerberus* parted from the *Haerlem* and transports, and on the 21st, p. m. we arrived in Cape Cod bay or harbour.

The sick list varied until the 10th—rather increased until the 18th, and was afterwards variable until the end of the month. There were never more than eighteen patients. In all, 35 patients were admitted: viz. eleven with fever; one with dysentery; two with scurvy; one with rheumatism; one with hæmoptoe; two with sore throat; two with cough; one with nephritis; four frost-bitten; one with scald; three with contusion; one with wound; one with inflammation; one with abscess; one with furuncle; and two with ulcer.

I suppose it will hardly be doubted that the badness of the weather was the cause of the fever prevailing

prevailing again; or of the infection being again roused into action. The surgeon of the Eagle informed me, that the *yellow fever* * raged with violence on board of the fleet last summer, on the passage between New-York and Chesepeak.

MARCH.

The 1st day the wind was SW; the 2d from SW to WNW. On the 3d, Northerly, with calms. The 4th, NW with fresh breezes; until the 21st it blew variably, but seldom strong. The 21st and 22d calms and light airs from NNW; it was then variable, and rather moderate until the 29th, when it blowed at ESE, veered round gradually to the NW, blowing strong gales the 30th and 31st. Frost with snow, every day except the 6th and 8th; continued till the 9th. The 10th, 11th, 12th, 13th, and 17th, light showers. The 16th, 31st, snow; 21st, 22d, and 23d, frost. The 28th, 29th, hail; and the 30th showers. We had the atmosphere more clear than usual, but it was frequently hazy and cloudy. Full moon the 12th; and new moon 28th. The mean height of the thermometer was between 33 and 34.

On the 1st, the Haerlem came into Cape Cod Bay, with 21 sail of transports. The lieutenant † who commanded her; his clerk; the surgeon; two

* I only speak here in compliance with custom. On this subject I shall have occasion hereafter to deliver my opinion.

† I attended him.

midshipmen ; and a number of the people were ill of fever. One of her men died, and most of the fever patients recovered with difficulty. Our second lieutenant caught the infection by being on board of her on duty. She was cleared, and sent with a flag of truce to Boston :—our first lieutenant and my first mate went in her, to take care of the men. Several of her men were taken ill while she was absent, but, by following the method used in our ship, they soon recovered.—17th, the Centurion joined us with orders from Lord Howe, and on the 19th the Orpheus joined us from a cruize. The small-pox were on board ; and several passengers from Rhode-Island. We sailed the 25th, and arrived the 29th ; with the Cerberus and most of the transports, at New-Port. Captain Griffith was commanding officer.

The sick list varied from the beginning until the 29th, when it decreased until the end, though very little. Six complained of fever ; one of dysentery ; two of rheumatism ; six of ophthalmia ; one of nephritis ; one of itch ; one of being frost-bit ; two of contusion ; one of inflammation ; and three of furuncle : 24 in all.

The patients were fewer than in the preceding month ; but our men had neither been fatigued nor got wet, excepting the watering party sometimes ; and they had an opportunity to purchase plenty of fresh fish and potatoes.

APRIL.

APRIL.

The wind varied frequently until the 10th, and blew a strong gale the 3d. From the 10th till the 15th, it was Southerly, light airs and fresh breezes; and then chiefly Westerly until the 26th. The 19th, 22d, 26th, 27th, Southerly. The 23d and 30th, gales; 28th, variable, and NNE afterwards; 3d, thunder and lightning with showers; 4th, and 20th, snow; 5th, 15th, 22d, and 30th, showers. The 9th, frost and snow; and the 16th and 17th light showers. The atmosphere was seldom clear, but generally cloudy or hazy. Full moon the 11th, changed the 26th. Mean height of the thermometer about 53.

The Venus was at Rhode-Island, and very sickly. The surgeon told me that they had lost about fifty * men of fever, and that it still continued to prevail on board. I think he said they became sickly from being crowded with prisoners, and by cruising with them on board in bad weather. They were so sickly, that they were obliged to come in before their cruise was out. In what manner he treated them, I did not ask him, but I was informed by a surgeon, an intimate friend of his on the spot, that he followed the antimonial method.

The Haerlem came in. Her people were recovering very slowly—9th we failed and anchored in the Narragancette passage, and relieved the So-

* Almost one-fourth of the complement—240.

merfet, which still continued sickly. I am told they buried ninety men of the fever since they left England; seventy of whom were of their best seamen.

On the 2d I sent a confused patient to sick quarters. A man who entered from a transport at Cape Cod complained the 3d p. m. of fever; with which he, and two more of the transports' people, had been lately ill. Several instances of transports becoming sickly from having sick foldiers on board occurred. Some of our men were seized with fever, by having been on board the Somerfet on the 9th. One, a midshipman, in particular told me, that while he was on board of her, one of her people, who came near him, smelled very disagreeably to him.

The sick list varied often, but it rather increased until the 14th. Then it altered very little until the 23d, when it began to increase for four days, and after that to decrease. In all, 25 patients complained; viz. eleven of fever; one of dysentery; one of scurvy; one of sore throat; one of worms; four of contusion; one of wound; three of inflammation; one of abscess; and one of furuncle.

When our sick men had leave to go on shore, to walk, they were forbidden to go near the Somerfet's old hospital. They bought milk. I began on the 9th to dig a garden.

On the 30th, after dark, a rebel frigate outward bound

bound passed very near to and fired at us, without hurting any person.

MAY.

Moderate Southerly and variable winds chiefly prevailed, but when it veered round to the Northward, there was a fresh breeze:—the Southerly winds were the sea breezes. The 1st and 2d, Northerly winds with showers. The 4th, 10th, 16th, 17th, 22d, and 31st, light showers. The 8th 14th showers; 11th, 12th, 13th, 18th, 19th, 28th, 29th, 30th, dews; 15th, dews with light showers; 24th, dews with lightning; and 27th hard showers. The atmosphere was more frequently hazy or cloudy than clear; 14th and 15th were foggy. The moon was full the 11th, and changed the 26th. Mean height of the thermometer about 61.

The sick list varied very little all the month; but rather increased towards the end. Fewer patients complained than in any other month. Those who did complain were eight of fever; one of head-ach; two of rheumatism; three of contusion; and one of furuncle: in all 15. Our people had leave to walk on Cannanicut, to gather greens; about the 20th they began fishing with lines; they also bought potatoes.

The Lark had three men killed and eight wounded by the rebel frigate on the 30th ult. On the 4th, all the men who were at sick quarters in Newport

port were carried to Captain Brenton's house on the Neck, which was converted into an hospital.

JUNE.

The 1st and 2d the wind was Southerly with fresh breezes. The 3d, 4th, and 5th, Northerly and NE with light airs, and fresh breezes. Until the 12th, it was Southerly, *i. e.* from SE to SW. Until the 17th it was Northerly, though generally calm. The 17th, 18th, and 19th, sea and land breezes, and calms; 20th, 21st, Southerly; 22d and 23d, NE, fresh breezes and calms, and then Southerly with frequent calms in the morning until the end. The 1st, 3d, 5th, 26th, light showers; 2d, hard showers; 4th, 7th, 8th, and 21st, showers. The 17th, thunder and lightning with light showers; 28th, lightning; and the 29th and 30th, thunder and lightning. Dews fell every night when it did not rain, except the two last nights. The atmosphere was generally hazy, sometimes cloudy, and at others clear. The 3d and 6th were foggy. The moon was full the 9th, and changed the 24th. The mean height of the thermometer was about 70. Towards the end of the month, the weather became very hot, and the ground was burnt up.

The sick list did not vary less in any one preceding month. Those who complained were six of fever; one of head-ach; one of dysentery; one of scurvy; two of rheumatism; one of hæmoptysis; one

one of fore throat; two of contusion; two of fracture; one of wound; two of inflammation; two of abscess; two of furuncle; and two, of ulcer: 26 in all. Nothing particular occurred among the patients.

JULY.

Part of the 2d the wind was NW; 7th was calm. The 12th and 13th the wind was NW and Northerly. The 17th Easterly. From the 20th to the 25th, Northerly and NNE. Throughout the rest of the month it was mostly Southerly; but sometimes it was late before the sea-breeze set in. The 1st, 2d, 3d, 8th, 9th, and 12th, thunder and lightning; 2d, 3d, 4th, 9th, 10th, 11th, 14th, 20th, 22d, 23d, 28th, and 29th, light showers. The squalls always came from the NW. Dews in the night. The atmosphere was not often clear; but generally hazy or cloudy. The 10th, 27th, and 31st, we had fogs. Full moon the 9th; 23d, it changed. Mean height of the thermometer was about 74. The weather was frequently very hot.

On the 29th, the French fleet appeared off the harbour's mouth, consisting of twelve sail of the line and three frigates. All our frigates immediately got under way, and went close into different parts of Rhode-Island.—30th, two of the enemy's ships went up the Narragancette, and two up the Seconnette passages. P. m. the King's Fisher, Alarm, and Spitfire

Spitfire galleys were burnt in the Seconnette, to prevent their falling into the enemy's hands. As soon as we got into Coddington-Cove last night, the people were employed about getting the guns on shore, with ammunition, provisions, and stores. 31st, our people were employed as before. Tents were erected ashore for the men.

The sick list rather increased till the 12th; and after that varied and decreased. The patients who complained were six of fever; two of head-ach; one of dysentery; one of rheumatism; one of cough; one of epilepsy; one of scald; two of contusion; five of wound; four of abscess; five of furuncle; five who were stung by insects; and one of ulcer: in all 35. One of the head-ach patients, who had the fever, was a prisoner when he was taken ill.

None but a guard slept on board after the 29th. It is somewhat remarkable, during such uncommon duty as the men were engaged in the last three days of the month, and the unavoidable hurry attending it, that no accidents happened to them. Several of them were bit in the tents by insects. Nothing particular occurred among the patients. On the last day of the month we had only lame people in the sick list.

HERE the journal ends. However, I think it proper to mention the case of a marine, who complained the 1st of August: After having been very drunk, probably with bad spirits and lying in the sun the preceding day, he was seized in the night with various symptoms. In the forenoon he complained of head-ach; griping; of great thirst; and weakness. I gave him an emetic, and ordered him an ounce of salts; but as they produced no stool, and he complained much of his bowels and limbs paining him, towards evening I ordered him a clyster, which gave him two stools, with a discharge of much wind, that relieved him greatly, he said; but he died in the night. To what cause his death was owing, whether to the liquor he drank, or to a coup-de-soleil, I know not; but I do not think it was, simply, fever. He expired in a shorter time than the man who died on the 12th of January, 1777, at New-York, whom I suspected of having drank some bad new spirits.

Although the infection received a very evident check on the 18th of March, by our firing so much, and seemed to be wholly subdued in the month of November following; we found it still continued on board, though dormant, and only required some exciting cause to put it in motion; which happened
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in December from the bad weather ; and perhaps partly from some stolen clothes of the men who died of fever ; which were hitherto secreted, being worn now by the people that stole them to shift their own *.

* Although I cannot demonstrate this, yet from my knowledge of seamen and marines, I think it was probably the case.

CHAPTER IX.

The Description of the Fever.

Arrangement of the Subject.

IN the following description, the symptoms are diurnally arranged as they appeared. But it is not to be understood, because some of them are daily repeated *, that they have been confined all along to those patients in whose cases they first appeared. On the contrary, they are to be considered as symptoms which occurred on particular *days of the fever* in some cases. It is also to be understood,

* Hence it will occur to the reader, that the same symptoms do not appear on the same days of different patients' illness: but that symptoms which happen in one case on the first day of a patient's illness, may not happen in other cases until the second, third, or fourth days of other patients; or even later days of their illness. Which repetition accounts for the same symptoms being daily repeated for some time; and constitutes an apparent variety of the fever; though in fact it is none; and shews only a variety of constitutions.

that some were seized with more, and others with fewer of the symptoms; and that they were combined very differently with respect to the order in which, for method's sake, they are here arranged. To avoid repetitions, the symptoms mentioned are generally only the most urgent; but when the fever is on its decline, about the 31st and following days, when few patients are ill, the most remarkable appearances are daily repeated.

Though the symptoms which I have termed diagnostic, generally introduce the fever, it was, at its first appearance, often attended with many other symptoms. 'Tis highly necessary I think that young practitioners should not only be apprised of this, but that they should be made acquainted with all the various appearances which the fever puts on, from its commencement to its termination, in a number of patients living as nearly as possible in the same manner. It is for this reason I have taken the trouble to describe it so minutely. The more such variety of symptoms occurring in the same disease, among persons living under the same regimen is considered; the more the reader must be convinced that the symptoms depend more on the constitution of the patient, than on other circumstances.

I shall first describe the most prominent symptoms of the fever diurnally; and then state some remarks on the description.

Symptoms

Symptoms of the Ship Fever described, diurnally.

THE diagnostic * symptoms, by which ship fever may be known, and is introduced, are rigours, or chilliness, or alternate chills and heats; nausea; or sickness at stomach; head-ach; universal pains; or, as the sick express themselves, pains all over them; or pains in all their bones; but especially in the loins or back; a morbid appearance in the countenance; and more or less debility.

But some patients informed me, that, before the shivering and other symptoms were perceived, they had been ailing; or had not been well, as they said, for several days, a week or a fortnight, three weeks, and even for a month: some drooped before the fever commenced. The duration and violence of the rigours, chilliness, or alternate chills and heats which introduced the fever, varied greatly; and the following symptoms, which either

* The author preferred this expression in his first edition of this book in 1783, and still thinks it the most apposite for his purpose; as being less liable to criticism in the sense he has applied it than pathognomonic would have been.

A late eminent reader of the practice of physic does not allow of any pathognomonic symptoms of fever.—First Dissertation on Fever, by Dr. George Fordyce.

accompanied or succeeded them, varied, in different patients exceedingly, both as to violence and duration.

Besides these symptoms, other patients complained of general debility ; universal soreness ; or, in their own words, of weakness in all their limbs, and soreness all over ; of great depression ; apprehension ; despondency ; lassitude ; faintness ; extreme coldness ; syncope ; and epilepsy ; of bitter taste in the mouth ; of oppression about the præcordia ; nausea ; retching ; porraceous or bilious yellow vomiting ; of slight cholera morbus ; belly-ach ; dysenteric symptoms ; diarrhœa with suppression of urine ; or extreme costiveness ; that the head either was much confused ; or disturbed with pain in the temples ; or in the back part, or in the forehead ; with giddiness ; or deafness ; of hæmorrhage at the nose ; tooth-ach ; sore throat ; and relaxed uvula ; of sensation of swelling about the præcordia ; and of the abdomen after chilliness ; of pains at the præcordia, previous to vomiting ; of uneasiness in the thorax ; very acute pains of either side *, resembling pleurisy ; with urgent cough, and difficult respiration ; of pain of the side, shooting down into the groin or thigh ; of pain in both ilia that descended to the feet ; of pain reach-

* Violent local pains suspend the patient's attention to, or his sensation of, slighter symptoms—of which they again complain as soon as the violent pain is relieved.

ing from the crown of the head to the sole of the foot of one side; of pain of the hams and pain of the right shoulder. In some cases the fever commenced with great heat, and much perspiration, without any previous shivering* or coldness. In the cases of some patients furuncles appeared †.

Various degrees of heat and thirst succeeded the rigours and chilliness in different persons. In some, the heat was burning, and the thirst insatiable; and in others both were moderate, though greater than in health. The pulse also varied greatly. All these variations having been observed throughout the fever, they will seldom be repeated.

In all these various ways was the fever ushered in.

First Day. Of those who were seized in the forenoon or afternoon, and complained immediately, numbers had remissions, and were much relieved within the first twenty-four hours by a vomit, which was instantly given; and by sudorifics; diluting drinks; and pediluvia—by which free perspiration was promoted in the night. Some patients were recovered by these means; but few had remissions without such assistance.

* Perhaps it was owing to their slightness that the patients did not attend to these symptoms.

† I suspect these made their appearance before the patient was seized with fever.

2. Many however passed the night ill from inquietude, and from having had no remission. Some had a remission, which, as well as the exacerbations and paroxysms throughout the course of the disease, were very irregular with respect to the time of their appearance and duration. Many had remissions of particular symptoms only while other symptoms continued as violent as ever. The remissions, whether more or less distinct, were generally effected by perspiration, and in some cases by stool *; but very seldom by vomiting †. Profuse evacuations however, either by sweat or stool, were so far from procuring remissions, that they generally seemed to increase the symptoms, and protract the paroxysm. Some were yet chilly; others had alternate chills and heats, and some had sensation of cold in the back only. The most general and the most urgent symptoms were head-ach; lumbago; and universal pain. The head was now affected in a more violent degree with heaviness, lightness, and with giddiness from looking at any object; with burning heat and profuse sweats about the fore-head; with pain of the left eye, or of both eyes, though neither were inflamed; with pain over the eyes, especially

* The natural, or spontaneous, evacuations are here meant.

† This patient came from the hospital the day before, and relapsed.

in stooping down ; with shooting pains in the eyes, and preternatural motion of them ; with inflammation of the eyes ; and with an eruption on the face ; which in other cases was turgid, and the eyes watery. The head appeared swelled ; with pain in both ears ; pain in and a discharge from the left with deafness ; and pain of the one side of the neck and shoulder. Soreness of the throat, hoarseness, and difficulty of swallowing were greatly increased by either teasing, or violent cough ; as, in like manner, were the giddiness ; the pains in the thorax ; in the abdomen ; and extremities. The right side was most frequently affected. The stomach and bowels were as much disturbed with pain, nausea, retching, vomiting, costiveness, or purging as before. Cramps and spasms of the limbs, and pains in the heels, were complained of. There was now universal uneasiness, as well as soreness ; prostration of strength and spirits with faintness, were complained of in some cases, while others thought themselves neither well nor ill.

A number were troubled with great anxiety, much uneasiness *and pain at the heart as they said*, pointing to the præcordia. Bitter taste of the mouth ; porraceous vomiting and purging ; hæmorrhage from the left nostril ; expectoration of foetid pus ; hæmoptoe ; delirium ; and petechiæ ; were frequent.

The countenance appeared greatly flushed, and

the eyes inflamed, as if the patient had drank; or it was pale or fallow, and extremely morbid; it also appeared wild, when the patient thought himself well. There were furuncles on the neck, and an angry eruption on the pained side of the thorax; the tongue was chapt across, foul, or blackish; the pulse was preternaturally full and soft; there was a yellowish, viscid, gelatinous, discharge from blistered parts.

In the afternoon there were many slight and short remissions, but more exacerbations. The former remissions were followed by violent paroxysms, preceded in several cases with, and in others without shivering. Relapses happened from, or were hastened by, irregularity. Interrupted profuse sweats occurred; and the perspiration, thirst, heat, and pulse, varied much.

3. A few were sent to the hospital, some recovered, others were now arrived at a convalescent state, and there were many remissions. But numbers of patients, instead of being relieved, were greatly debilitated and depressed by sweating profusely in the night. Perspiration kept up twenty-four hours procured no remission in some cases; and in others profuse moisture was diffused all over; and on feeling the pulse, a disagreeable sensation was impressed on the fingers. This sensation, though not equally perceptible, was observed in all cases, especially during perspiration; or when

when the skin was covered with cold, clammy, and uncomfortable sweats. Many passed the night very ill, either having no remission of the symptoms, or from profuse exacerbations, or irregular paroxysms, or from having perspiration and inquietude.—The rigours held some patients four hours, and were followed by violent paroxysms.

A sensation of great cold, while the skin was burning hot, and a sensation of chilliness at times, were complained of. But the most distressing symptoms during the paroxysms, besides those already mentioned, which were aggravated by more or less cough, rendering respiration difficult, were pain of the crown of the head; strictures about the thorax; shooting, wandering, or flying pains; pain in the scrobiculus cordis, shooting through to the back, or darting from the right to the left breast; pains across the ossa innominata; or of the right buttock, or knees, and wrists. Loss of speech in the night; with distorted face; great inquietude; delirium; and death in one case. The thorax and abdomen were still complained of; a bloody discharge issued from the left ear; hæmorrhage from the nose; hæmoptoe; and various expectorations of viscid, ropy stuff in some cases, occurred; and in others very foetid pus was expectorated. The stools were still porraceous; or bilious; or watery; or white with high-coloured urine. There was a copious discharge of urine, and sometimes involuntarily.

tarily. Some had large eruptions on different parts of the body; petechiæ and raving were observed.

Great debility; giddiness; heaviness; or lightness of the head; with great despondency and faintness; and a bitter taste in the mouth, were very distressing during indistinct remissions. The limbs were *tired and sore*, as if the sick had come off a long journey; and some felt torpor of the back and limbs, expressed by patients *as being asleep*. Inability to shut the hands, was complained of; and also internal soreness, or *soreness in the inside*. The countenance was still flushed; or sometimes was pale; fallow; wild; or greatly dejected. The palate and tongue were sore, and the latter was also red and foul in the middle.

4. A few patients recovered; others arrived at convalescence. A few had remissions all day; and some had cold sweats. Profuse perspiration as heretofore, in many cases, procured no remission. Remissions, exacerbations, and paroxysms, were as irregular, and generally more violent than before. The paroxysms accompanied with raving, were followed by sweating at midnight, and by exacerbations in the morning. A remission of pain with uneasiness, heat, and thirst was observed. The head-ach was relieved by stools.

The most urgent symptoms were frequent shivering, alternate heats and chills, vomiting. The paroxysms, which were preceded by cough, and pain
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in the breast, introduced by shivering; and the exacerbations by langour, with heat in the head were distressing. In violent paroxysms, the eyes were unusually prominent. The cough in many cases was dry and urgent, and increased the belly-ach.

The pain in parts which had been formerly hurt, particularly about the clavicles, was most violent: Palpitation at the heart* occurred. The head; eyes; ears; countenance; throat; thorax; and abdomen were still affected as at first; and in some cases without any remission. The cough was sometimes attended with difficult respiration and tremours. The pains were as various, and numerous as before. Tinnitus was observed. The various discharges; evacuations; and expectoration of brown thick stuff continued; and also diarrhœa with faintness. Worms were voided by stool. Some had cold sweats in the night; interrupted respiration, and sensation of *creeping* and *wasting* of the flesh. The hæmorrhage from the nose increased the giddiness. An abscess which began to form on the neck, before the fever commenced, suppurated kindly, and after being laid open discharged good matter freely. The urine smelted very strong, and the patients were not refreshed nor relieved by sleep. A green matter was discharged from blistered parts. Raving was common; and many had petechiæ.

* The patient at other times was subject to this symptom.

Besides the symptoms which prevailed during the remissions on former days; terror; momentary partial sweats; depression; breathing through the nose; loss of taste; universal debility and foreness were now complained of; and head-ach and cough were increased by getting out of bed, or sitting up.

There was no alteration in the countenance for the better; and in some cases the tongue was very foul, and much enlarged.

5. Some recovered; numbers began to recover. Remissions in some cases; and in many no remissions appeared. Violent exacerbations and paroxysms were most frequent. Remissions were still introduced by perspiration or stools. Many passed the night ill from rigours; head-ach; various pains; urgent cough; sweating; from inquietude and wandering.

Shivering for two hours, or chilliness, or alternate heats and chills introduced the paroxysms, attended with all the variety and severity of pain; cough; and laborious respiration hitherto mentioned; and likewise with retching; belly-ach. Constipations in some; and in others diarrhoea. Besides inflammation of the throat; and pain of the neck; there was pain of the right side of the head, eyes and neck, shooting through to the left temple on turning the head round. Violent pains of the left ear and side of the head. Dimness of sight

fight at times; nervous pains, to which the patient was subject, and tremours were complained of. Some were chilly at times; others were so all day. Disagreeable respiration; loss of speech; muttering and singing inarticulately, a ghastly countenance; and death in one case. Some lay contracted on one side. The evacuations were little altered. Colliquative sweats; reeking moisture; or partial profuse sweats continued. Blood mixed with pus; or pure pus were expectorated. Hæmorrhage at the nose, bilious vomitings, porraceous and watery stools continued. In some cases the stools were mixed with blood and matter. The angry eruptions about the mouth extended up to the nose. An eruption resembling itch spread over the body. Petechiæ were very numerous. The gelatinous discharge from blisters continued.

All the distressing symptoms before taken notice of, with anxiety and restlessness, during the imperfect remissions, prevailed.

The countenance and tongue varied in appearance as before, and the teeth began to be covered with fordes.

6. The sick passed a restless, unquiet night. There was continual chilliness; vomiting, or purging, or sneezing, previous to the paroxysms, which harassed different patients. The paroxysms were brought on by wet. Some patients still complained
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of pains and other affections of the head; eyes; ears; throat; abdomen; loins; and extremities. A very urgent cough, occasioned sickness at the stomach. The head and abdomen were more disturbed than ever, but many thought themselves better at times. Some complained of belly-ach, accompanied with swelling and tension of the abdomen; of pain all down the spine; of pain of the ankles after profuse sweating; of sensation; of *hollowness** in the breast; with a sighing kind of respiration; and of tremours; of spasms; delirium; ptechiaë; and perfect mania.

The eruptions; perspiration; vomiting; stools; expectoration; and the appearances of the countenance, and of the tongue, were as various as ever. But the countenance was now become sooty in some cases; and the lips were very foul; the tongue was rough; slimy, and black on each side. In a case of fever, accompanied with vomica, the breath was very offensive, and the thirst was great though the skin was quite cool.

The same disagreeable symptoms prevailed during the remission as before. Some were arriving at and some advancing in a state of recovery; and a few recovered.

7. The sick passed a bad night from heat, thirst, sweating, head-ach; from all the variety of pains,

* Or sensation of emptiness.

dyspnœa,

dyspnœa, and cough, as before mentioned. In some cases the head; eyes; throat; stomach; and intestines continued to be affected as at the beginning of the fever. Heat about the head; pain down the whole spine; and pain about the os pubis were complained of. The part of the side, in which there was excruciating pain, was tumified and tense. Shivering was still frequent. A worm was voided by the nose. Relapses with head-ach. The alæ of the nose were distended. Some patients drank often and greedily; they looked frequently at their fingers; and were agitated with starting tremours; with continual wandering; or raving; or effusion of tears; with mania, and involuntary discharge of the fæces; which terminated in death. Expectoration, though not general, had the same appearances as usual. There were numerous eruptions of various kinds. Some were like the stinging of nettles; but the itch-like eruption was the most general, and the most troublesome. Petechiæ were observed. The tongue had various appearances, and trembled on putting it out of the mouth, and the countenance was much diseased.

The remissions were attended with the same train of symptoms as before. Some recovered, and numbers were in a convalescent state.

8. The sick rested ill from shivering; head-ach; whimsical dreams; raving; starting; motion of the hands; oppression and foreness at the præcordia;

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and a short, laborious respiration, while the patient thought himself well. Rigours for four hours introduced paroxysms; during which most of the violent symptoms, already mentioned, still harassed the patients. In some cases, there was no remission for twenty-four hours. Neither the head, the thorax, nor abdomen of some patients were relieved. Universal pain; uneasiness; anxiety; and inquietude were frequent. One became scorbutic. The blistered parts; the nose and tongue of some patients were very sore. The face was squalid; the nose contracted; and continual raving was not uncommon. Some were even maniacal. Others lay on their backs with ghastly countenances. The respiration was very laborious, with rattling in the throat. Petechiæ were still observed. Costiveness was very obstinate; and white frothy stools with much flatus, were voided by the assistance of clysters. In some cases expectoration was free and laudable. In many others the reverse was observed. Previous to the cough which brought on hæmoptoe, there was sense of great weight about the præcordia; and after hæmoptoe, sensation of great heat in the same parts succeeded. Hæmorrhoids and prolapsus were troublesome to a few patients.

The countenances; eruptions; tongue; thirst; and the state of the skin and pulse varied as usual; as also did remissions, and the number of those who recovered.

9. The patients were very restless in the night; were troubled with dysuria; and their sleep was not refreshing. Shivering or alternate chills and heats, very frequently introduced the paroxysms. But in some cases they were preceded by stiffness of the neck; or an obtuse pain of the head, with nausea, and pain in the stomach. Bilious vomitings were more violent than ever. Some were deaf; others were afflicted with giddiness. Head-ach; pains about the thorax; the abdomen, loins, and the extremities, harassed others. Universal pains, especially about the joints; with urgent cough; costiveness; and diarrhoea, were still frequent. Prolapsus ani, and much heat about the anus. Some complained of dysentery, with great debility, especially of the loins. The voice became rough; the eyes were very much affected, and in some cases were constantly shut, unless when the patient was roused. A few were turbulent and unruly. In some cases were observed loss of speech; the pulse hardly perceptible; and turning up and rolling of the eyes. Two died. Some complained of numbness, or want of feeling. Hectic heats were distressing, while very offensive pus mixed with blood, and in some instances an exceeding viscid brown stuff was expectorated. The eruption about the mouth and nose suppurated, and began to dry; and desquamation of the itch-like eruption took place. The countenance continued very much diseased, as well as the tongue;

which in some cases was very black, much enlarged, stiff, and very painful. In other patients it was much swelled and chapt, and the teeth were covered with fordes. Many petechiæ were still observed.

Some now recovered, and many were in a convalescent state.

10. Shivering; inquietude; universal uneasiness; and delirium; were still frequent. The head; thorax; abdomen; loins; extremities, and particularly the joints, were still much and variously afflicted. The pains of those parts were still exasperated by cough. Great hoarseness, with pain and difficulty in speaking, arose from an enlarged black tongue, and parched fore mouth and throat. Some lay on their back, with the mouth open. Tremours and startings were distressing, and petechiæ of different shapes and sizes, with various other eruptions, were still observable. In one case, they spread at the base and became livid. The fallow and morbid countenance still continued; the tongue and teeth were very foul and black; and expectoration was more general. The worst species of which was very yellow and very fetid.

Besides the train of symptoms already mentioned in remissions; a sensation as if cold water had been poured on the loins, or down the anterior parts of the thighs was complained of. The convalescents gathered strength very slowly; but some recovered.

11. Many

11. Many passed the night very ill, from violent paroxysms and exacerbations, during which the body was afflicted as usual. Rheumatic pains were very common. Some were delirious, with a pulse hardly perceptible; and some died. Relapses introduced by chilliness were frequent; and colliquative sweats, with sickness at stomach and retching, were very distressing. The blood was in a dissolved state. A few drops of blood from the right nostril, in one case, relieved the head greatly. Involuntary effusion of tears, and expectoration continued. Costiveness was very troublesome. There was little alteration on the countenance; in the throat; or about the tongue; or crust about the teeth. The pellicle or coat began to cast off from the tongue. The eruptions continued.

Some convalescents were costive—others had diarrhœa. Most of them complained of uneasiness; heaviness of the head; giddiness; deafness; languor; and debility. Some recovered.

12. Inquietude, cough, and pains continued to distress many in the night; as did also alternate chilliness, and profuse sweats. Profuse expectoration, very much debilitated the sick. Chilliness; or alternate chills and heats; vomiting and delirium, still introduced paroxysms. Exacerbations were very violent, and relapses frequent. Pains in every part, as well as the usual complaints about the head and throat; bitter taste in the mouth; sickness at

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stomach;

stomach; with uneasy sensation; retching; diarrhoea; costiveness; suppression of urine, and despondency were frequent. Some were yet troubled with partial, and momentary sweats. The various eruptions; the appearances of the countenance; tongue; teeth; throat; and expectoration were not altered for the better. Hard lumps were voided by the aid of clysters; and in some cases white specks were observed on the florid blistered parts. Petechiæ still appeared.

Those who had short, and uncertain remissions; and the convalescents still complained of the symptoms already mentioned. Of the convalescents it is remarkable, that they often denied their having had any sleep, though they appeared to sleep well. Some recovered.

13. Chilliness at times; relapses, with nausea, and bitter taste in the mouth; paroxysms; exacerbations with the various pains, and concomitant symptoms already mentioned, with aching of their bones; universal debility and soreness, especially of the joints, were yet frequent. Costiveness; diarrhoea; giddiness; pain of the right ear; and depression were prevalent. Some were become extremely thin; and numbers were harassed with the itching eruption. Petechiæ still appeared.

Remissions were accompanied with the usual symptoms. The tongue was red and very sore, when the pellicle cast off. Many of the convalescents

ents were feeble and peevish. Great difference was still perceptible in the pulse, the thirst, and state of the skin among the patients. Some recovered.

14. Many of the patients had restless nights from paroxysms of head-ach, and severe exacerbations of various pains and of cough*. Relapses; chilliness; bitter taste in the mouth; sickness at stomach; giddiness; heaviness; great debility; languor and depression were distressing. There was a discharge from, and also a pain in the right ear. A free expectoration in some cases only. Whenever the pellicle cast off from the tongue, another began to form immediately. Costiveness in some cases; and diarrhoea in others continued. Petechiæ and other eruptions still appeared. Some patients had a more florid appearance, without the itching formerly mentioned.

The convalescents complained of chilliness. Some were still insensible and delirious, and some recovered.

15. Many passed an indifferent night from languor and head-ach. Numbers not relieved, but were very faint after perspiring in the night. Relapse with shivering; chilliness; sickness at stomach; violent paroxysms or exacerbations; with delirium; and three drops of blood from the nose. In the after-

* The rheumatic pains; hoarseness; sore throat; and cough were most frequent and violent in the cold winter months. The fever continued two years in the ship.

noon tremours of the hand ; petechiæ ; pains in the toes, but especially the left ; universal forenefs and debility, fore throat and depression. The eyes were inflamed in some cafes, and in others fore and painful ; the difcharge from the ear was lefs, but ftill troublefome. Coftivenefs and hæmorrhoids were obferved.

The tongue was foul in the morning after fleep ; and thofe who had remiffions, as well as the convalefcents, were fatigued with the ufual fymptoms. Some recovered.

16. Debility and faintnefs after profufe fweats. Sensation of coldnefs while the fkin was very hot. Irregular paroxyfms and exacerbations ; alternate chills and heats ; relapses ; naufea ; head-ach ; giddinefs ; univerfal pains, efpecially about the præcordia, and about the loins, knees, and ankles. Inceffant cough ; great anxiety ; and ghafly countenance ; were frequent fymptoms. Some fpoke very indiftinctly ; groaned, and the tongue was black ; yet they thought themfelves better. Petechiæ ; diarrhœa ; coftivenefs ; ear-ach ; and the itching eruption remained. The tongue was much difeafed, and the teeth were foul.

Some recovered ; and others continued to recover very flowly.

17. Some paffed the night ill from urgent cough ; from various pains ; and from heat and inquietude ; while defpondency and groundlefs apprehenfions difturbed others. The remiffion of the cough ;
pain

pain of the toes ; relapses with chilliness, or slight rigours were succeeded by head-ach ; ear-ach ; pain about the breast ; and uneasiness of the stomach ; or by giddiness ; debility ; depression ; tremours of the hand ; numbness of the lower extremities ; and costiveness. A laudable expectoration in some cases Thick urine was voided with pain ; in some cases the disagreeable sensation was still impressed on the fingers in feeling the pulse. Eruptions continued, there was an angry furuncle on the right cheek, and the tongue was streaked black. The countenance ; thirst ; pulse ; and state of the skin differed greatly amongst the patients.

18. The sick passed a restless night from retching ; belly-ach ; partial sweats and various pains, as already mentioned. Pains of the sides ; knees ; and toes were mostly complained of ; and also a dry, teasing cough. Relapses with diarrhœa ; head-ach ; and various pains. Costiveness continued ; and diarrhœa commenced in some cases. The ear-ach, and a watery discharge from the ear, was troublesome. Some had a disagreeable reeking clammy perspiration. A black blister appeared on the tongue when the patient awoke in the morning, and was a common symptom of disease. The sick were generally feeble ; groaned at times ; and were dejected. The tongue and the countenance were yet diseased. The former appearing of a pomegranate colour, and the latter fallow and dejected ; but the eruption began to dry and fall off.

19. Relapses accompanied with shivering or chilliness; with sickness at stomach; head-ach; fore throat; pain of the neck; pain and swelling of the left ankle; and universal pains were all increased by urgent cough. Languor; dejection; and costiveness were harassing. The countenance was yet morbid, and there was something singular about the eyes of one patient, as if he had been afraid when he was spoke to. The eruption became livid *, and the appearance of the tongue still varied; and as one black pellicle fell off it, another formed very slowly. Some recovered.

20. Some passed part of the night ill from vomiting and purging. Relapses; bad taste of the mouth; sickness at stomach; head-ach; fore throat; cough; giddiness; and various pains, particularly of the lower extremities; belly-ach; costiveness; debility; and wandering were very troublesome. And petechiæ were still observed. The eyes were sunk in the orbits; and the tongue was sore, chapt and foul. The itch-like eruption was thickest on the extremities; there were furuncles on the shoulders.

Exacerbations towards night; and the convalescents recovered slowly.

21. Head-ach at times; ear-ach; the universal pains; belly-ach; diarrhœa; cough; dejection of spirits; and inordinate craving were the most fre-

* Not the itch-like eruption.

quent symptoms. A remission followed stools and perspiration.. The ear continued to discharge; the livid eruption was troublesome; the countenance was yet diseased; and the tongue was foul, fore, and had an uncommon appearance. The convalescents were very languid, and recovered slowly.

22. Sicknefs at stomach; head-ach; giddinefs; belly-ach; diarrhœa; scalding and high-coloured urine; cough; dyspnœa; debility; universal pains; especially of the upper extremities were the symptoms complained of most. There was an unnatural motion of the head and hands; and the tongue was still fore.

23. Some passed a bad night from belly-ach, and diarrhœa. Rheumatic pains; ear-ach; cough; the itch-like eruption; debility; languor; and thirst were troublesome. The tongue was dry, but the expectoration was now free and copious.

24. The head ached, and was confused; the eyes watered; the cough was urgent; costiveness and inordinate craving prevailed. Despondency and depression were distressing; the countenance was much diseased, though the patient complained little; the mouth and tongue were foul; the thirst, pulse, and state of the skin, still continued to vary. One became scorbutic. The convalescents recovered slowly.

25. Retching to vomit; head-ach; ear-ach;
wandering

wandering pains; debility; tension of the abdomen, and costiveness still prevailed. Urgent cough also harassed the sick. One became scorbutic. The tongue was still dry and foul.

26. Some of the sick passed an indifferent night. Retching; cough with pain; and foreness about the breast; ear-ach; with prostration of strength and spirits, but especially weakness of the loins, were the most urgent symptoms.

27. Head-ach; costiveness; pain and foreness of the abdomen; sickness and languor from sitting up in the hammock; cough; debility; and dependency were yet distressing to the patients. The eyes were glassy, and the tongue was covered, at times, with a slimy mucus.

28. A very bad night from inquietude was complained of. Some were yet languid and depressed, with wildness of countenance. Many of the convalescents denied that they slept; and the furuncles were not quite healed.

29. Head-ach; belly-ach; diarrhoea; languor; and the itch-like eruptions, especially about the thighs, were very troublesome. The tongue had the pomegranate-like appearance.

30. Some passed the night ill from pain and sickness at stomach; others from ear-ach; head-ach; deafness; or from costiveness. Though the patient thought himself pretty well, the countenance was yet diseased. The right side of the
scrotum

scrotum of one of the convalescents appeared excoriated.

31. Relapse; head-ach at times; ear-ach; pain of the side; belly-ach; diarrhœa; and craving were observed. The skin was yet fallow; but the lips were beginning to recover their natural appearance.

32. Wandering and delirium in the night; chilliness; head-ach; pain of the side; diarrhœa; and depression continued. The tongue was foul.

33. Severe head-ach in the morning; a bad taste in the mouth; and an expectoration of something disagreeable. Universal pains and soreness, but especially of the side and breast; and costiveness prevailed. The countenance was yet wild.

34. A paroxysm in the night; ear-ach; costiveness; and diarrhœa were still observed.

35. Bad taste of the mouth; belly-ach; costiveness; diarrhœa; dysenteric symptoms ever since they were last mentioned, and debility were frequent.

36. Head-ach; cough; costiveness; and brown tongue; were now the most obvious symptoms.

37. Pains of the hips and cough were urgent in the night; but the expectoration was easy and copious. Universal soreness and languor were distressing. One was very lousy, and several had been so.

38. Cough and slight wandering in the night.

39. Head-ach in the night prevented rest; wandering;

dering; with cough; expectoration; and diarrhœa harafied others. The countenance was wild. One patient, when interrogated, started up suddenly, and exclaimed in a loud tone of voice, that he was well. This patient's legs and feet had been cold, he said, twenty-four hours.

40. The night passed ill from raving and inquietude. One patient was greatly emaciated, and lousy. One convalescent was costive.

43. The costiveness continued, and the itching eruption on the thighs.

45. Sent the costive patient to sick quarters for change of air and milk diet. The patient with eruptions was recovering, and sent to sick quarters the 48th day of his illness; but during the 48 days he had frequently relapsed. One patient did not recover until the 56th day of his illness*.

* This description is perhaps the more valuable, because it is collected from all the patients treated under the different methods of managing the fever.

CHAPTER X.

Remarks on the preceding Description.

THE most obvious symptoms which mark the difference between ship fever, as described in the preceding chapter, and the fever arising from Marsh effluvia described in the first volume, are as follow :

1. Ship fever being much more readily contagious than remittent fever.
2. The long continuance of ship fever * in any situation.
3. The duration of ship fever in individual cases.
4. The frequent relapses which individuals suffer during their illness before they recover.
5. The frequent relapses many individuals suffer after having perfectly recovered. And,
6. The great variety of eruptions which accompany ship fever, particularly petechiæ.

Is the first discrimination depending on any other cause more than its being a deeper shade of the same colour? or a more virulent degree of the same disease?

May not the second discrimination depend in some measure on the frequent importation of fresh infection

* e. g. On board of ships, in camps, hospitals, and jails, or domestic societies ; there is no specific difference in the fever.

on board during the illness, though perhaps not attended to? Can the great diversity of symptoms accompanying ship fever be accounted for in any other *rational* way than by referring their cause to the state of the system antecedent to and during its infection? Even admitting these, do the nature and manner of the subtle poison, *febrile infection*, operating on the human system, still remain inexplicable, while its progress and effects are very evident? Or,

Does it depend on the patient's continuing, while in a feeble state, to live under the influence of the virulent infection, or the infected air *? And,

Do the third and fourth discriminations proceed from the same cause?

Do the various eruptions, even petechiæ which frequently appear together with other eruptions, and seem to be a more general concomitant of ship fever when treated with antimonials †, or other debilitating medicines, also depend on the constitutions of the sick?

Whether in those queries are comprehended the real sources or causes which occasion the symptoms that discriminate between ship and remitting fever, is perhaps of little moment; it is sufficient that their existence indicates a virulent infection, and the con-

* I am aware that this is contrary to the opinion of Dr. George Fordyce.

† For want of bark on board the Juno, I was obliged to administer those antimonials, or camphire, in different ways.

sequent

fequent necessity there is for the utmost exertion of human skill to subdue, or at least to render the infection as mild as the nature of things will admit; and it is a consolation, that, notwithstanding any apparent difference between them, they are in reality to be cured by the same means, viz. Peruvian bark, or the *tonic practice*.

CHAPTER XI.

*The Management of the Fever.**Remarks on different Remedies.*

CONVINCED by observation and experience that the Peruvian bark *only* was to be depended upon in the cure of fever in hot climates, I could not observe that the ship fever, as it appeared on board the Juno in America; and the fever I had formerly managed, to my entire satisfaction, on the coast of Africa, and in the West Indies, on board the Rainbow*, differed so materially, notwithstanding the genera and species of fever mentioned, and the various methods of treating them recommended by authors, as to require, in my opinion, any peculiar alteration in the management of ship fever.

I therefore resolved, after the use of very moderate evacuations, to place my dependance on the bark.

This resolution I steadfastly adhered to until the end of December 1776, when my stock of bark would not permit me to adhere to it any longer;

* See Volume First, 1772, 1773, and 1774.

but in particular cases only *. That my resolution was fully justified by the success of the practice, will appear from the facts hereafter stated in the Comparative Tables.

But the advocates for camphire, antimony, &c. may probably deny that I depended on the bark only, seeing that I frequently joined some other medicine along with it †.

This argument, at first sight, appears to have some weight; but if the following circumstances are duly attended to, it will avail them little.

First: Until a very short time before the marine died on the 13th of October, I neither was aware that we had contracted infection, nor that the patient was dangerously ill. By which means he got no bark; and his case terminated after the manner of those who took no bark on board the Preston, the Weasel ‡, and the Rainbow.

Second. Observing that men were daily seized with fever; and reflecting that many of them might not only be infected, but that it might be a long and difficult task to subdue the infection, I combined other medicines with the bark, more from a neces-

* When we arrived at New York, Peruvian bark was sold for a guinea per pound: a price sufficient to tempt the sellers of that valuable drug to adulterate it; and to prevent surgeons of his majesty's ships from purchasing it.

† See case 1. of this volume.

‡ See Vol. I. p. 41—79—400—408.

fary caution, than from an opinion that they would contribute to its efficacy. The tartar emetic was most frequently joined with it, as the most compendious evacuant ; because it neither perceptibly augmented the bulk of the dose, nor rendered it more nauseous. That whatever be the medicines we depend on, the natural evacuations, secretions, and excretions must be, if possible, duly maintained, is indisputable.—But,

Third. Should they still retain their opinion, I refer them to the Cases and the Comparative Tables, demonstrative evidences which clearly shew the success of different modes of treatment.

Further. If they exclude bark from their practice, all other methods of treatment whatever will be found less successful.

Blisters applied early, in many cases *, put an end to the fever—especially when head-ach was the most urgent symptom—otherwise they produced little or no effect, either as stimulants or drains †.

* This is agreeable to what Dr. Lind has said of blisters, in his Dissertation on Fevers and Infection ; but the Dr. thought that the benefit derived from blisters was owing to the drain they procured. In this opinion, I entirely differ with my late friend. For I attribute the benefit they are of entirely to their stimulating property ; and on this principle would prefer communicating the stimulating property of the cantharides without vesicating the part, if it could be effected.

† See the Essay on Fevers : now Vol. III. of this edition:

CHAPTER XII.

Method of Treatment with Bark.

OUR situation in North America being so much farther to the northward than the Coast of Africa, I was afraid to begin the management of the fever in any other way than the one universally practised—i. e. by letting blood: but after repeated trials I was convinced the practice was mischievous. For scarcely one patient could bear the loss of a few ounces, without either becoming languid or faint; or without complaining, afterwards, of debility more than other patients—though the pulse and present symptoms seemed to indicate the necessity of lessening the quantity*. Experience has taught and convinced me that it will not be necessary to let blood in one of a hundred cases of ship fever†.

* This is a fair and full acknowledgment that I had not yet ventured to shake off, entirely, the prejudices of education; which positively taught, that the cure of all fevers was to commence with blood-letting in more or less quantities.

† For the appearance of the blood taken away, see the Sick List.

I therefore generally began with a vomit* of pulv. ipecac. gr. v. and sometimes tart. emet. gr. fs. which was repeated every half hour, until it operated—and then was wrought off in the common way, with warm water. In the evening I gave one of the following sudorifics, and sage or mint tea, or barley-water, to drink after it, through the night :

Five grains of salt of hartshorn, or sal. ammon., *volatile alkali*, with half a grain of opium made into a bolus :

Or one grain of emetic tartar, or acetated antimony, with half a grain of opium made into a bolus :

Or from fifteen to forty drops of Huxham's essence of antimony, with from fifteen to thirty drops of Thebaïac tincture, in one ounce of simple water, and a little syrup, at bed time †.

It was seldom thought necessary to repeat the vomit, in the course of the fever.

* When given upon the first appearance of chilliness or shivering, numbers of patients were entirely cured by it; as Dr. Lind also found, and mentions.

† ℞ Sal C. C. gr. v.

Opīi, gr. ss. fiat bolus.

Vel Tart. emet. gr. i.

Opīi, gr. ss. fiat bolus, hora somni deglutiendus.

Vel Essent. Antim. Huxham. gut. xv—xl. Tinct. Theb. gut. xv—xxx.

Aq. simp. ℥i. ss.

Syr. com. q. s. fiat haustus, hora somni sumendus.

If

If blood was taken away in the morning, the emetic was prescribed a few hours after, and the sudorific at bed time. Otherwise, when the patients complained in the afternoon, and blood was taken from them, the sudorific only was administered that night, and the emetic next morning.

Unless several copious stools were procured by the vomit, a few hours after its operation, I ordered a purging draught of Epfom salts, and crystals of tartar in water, to be worked off with water gruel *.

But in some cases the cathartic solution was divided into four parts, one of which, with a drachm of Peruvian bark in powder, was administered every hour. At night the following anodyne draught was frequently prescribed :

Three drachms of Huxham's tincture of bark ; one drachm of tincture of snake root ; with from ten to twenty drops of Thebaïac tincture, in a little water and syrup †.

* R Sal. cath. amar. ℥i.

Crystal. Tart. pulv. ℥ij.

Aq. ferventis, ℥iv. fiat solutio, tepidula bibenda ; ac postea, ad libitum, pulmentarium tenue bibant.

† R Tinct Cort. Per. Huxham. ℥ij.

—Serp. Virg. ℥i.

—Theb. gut. x—xxx.

Aq. simp. ℥i. ss.

Syr. com. q. s. pro haustu.

When the head-ach was violent, a blister was at the same time applied to the back.

Next day, being the third or fourth * of the patient's complaining, I prescribed one drachm or two drachms of bark in powder, with simple water, to which was occasionally added six drops of elixir of vitriol; or twenty drops of Thebaïac tincture; or a spoonful of white wine †.

This draught was taken every hour, or every two, three or four hours, as was thought proper. But instead of this draught, two ounces of the following decoction with other medicines was more generally prescribed:

Four ounces of the bark in gross powder; and two ounces of the gross powder of cascarilla, were boiled in three gallons of water, down to one, and the decoction strained off ‡.

But the bark was always, for the worst cases, prescribed in substance. In cases accompanied with

* It is always to be remembered, that though the sick frequently did not complain until evening, that was reckoned the first day.

† ℞ Pulv. Cort. Peruv. ʒi.

Aq. simp. ʒ. iss. fiat haustus; cui vel Elix. vit. gut. vi. — vel Tinct. Theb. gut. xx. vel vini alb. cochlear un ut visum adde. Sometimes the dose was increased to ʒij. of the Pulv. Cort.

‡ ℞ Cort Peruv. crass. pulv. ʒiv.

Eleuther. crass. pulv. ʒij.

Aq. simp. cong. iij. coque ad cong. ij. et cola.

constipation

constipation of the bowels, I joined either from ten to twenty grains of rhubarb, or more frequently, from two drachms to half an ounce of Epsom salts; and sometimes one fourth of a grain, or half a grain of tartar emetic. When violent pains were complained of at night, I frequently ordered the following anodyne bolus :

Four grains of camphire, with half a grain, or one grain of opium, and as much conserve of roses as was sufficient to form a bolus*.

And for the convalescents, I ordered an opiate regularly every night.

The drink, besides what I have already mentioned, was sometimes very thin gruel; and it was either acidulated, or had nitre joined to it; and clysters and pediluvia were also occasionally made use of.

In this manner I treated the sick until they recovered; and in the mean time I allowed to those patients, whom I thought proper objects, a little wine. When they arrived at a convalescent state, their diet was the most proper that circumstances would admit.

I must, however, acknowledge, I was much vexed to find, notwithstanding all the attention I paid to the sick, that the fever was far more obsti-

* ℞ Camphor. gr. iv.

Opii, gr. ss—gr. i, ut visum, f. bol.

nate, and more difficult to cure than it was on board the Rainbow.

Query—Did this proceed from the difference of climate—from the constitution of the sick—or from the nature of infection? From the virulence of the infection only, I believe.

It was no less perplexing, that the patients, when they were nearly recovered, would often relapse from very slight causes.

The method of treatment will be more fully explained in the following cases.

CHAPTER XIII.

Cases of the Fever treated with Bark.

CASE 1.

THOMAS LAWSON, a marine, aged about thirty, was seized on the morning of the 21st of October 1776, with shivering, head-ach, sickness at the stomach, and universal pains. When he complained p. m. the pulse was small and quick. He immediately took an emetic, and afterwards drank freely of diluting drink.

2. The vomit operated well; he sweated in the night, and was a little relieved in the morning; when I gave him a dose of Epsom salts. 4 p. m. a severe paroxysm came on preceded by four hours shivering. At bed time he took a sudorific draught; and a blister was applied between his shoulders.

3. He passed the night very ill from great heat and inquietude. No perspiration. I ordered two
ounce^s

ounces of the decoction of bark, with half a grain of tartar emetic; every four hours.—4 p. m. he became chilly again for a little; and thought himself better; though he complained of pain about his eyes, and was much dejected. The pulse was small, and quick; and petechiæ appeared on different parts.

4. Perspiration was perceived on him at midnight. Early a. m. the head-ach, and pain about his eyes increased; the countenance was bloated, and otherwise much diseased. He raved; his skin was hot; and thirst greater. He took the same medicine as was prescribed yesterday. At 2 p. m. a severe exacerbation commenced. He had three stools, and a scalding of his urine from the blister. A camphire bolus of five grains was given him at bed time, and the pediluvium prescribed.

5. He sweated a little, but passed a very indifferent night from inquietude; and was no way relieved, except of the scalding of his urine. He took the decoction of bark with the antimonial, and sixty drops of the snake root tincture every four hours; and the camphire bolus at bed time.—In the afternoon he complained less of pain; the pulse was firmer; but petechiæ were more numerous.

6. He became easier after resting the first part of the night; yet the pulse was still quick and hard. He continued the medicines prescribed yesterday. Between three and four p. m. a paroxysm came on,
during

during which the head was much affected. Diarrhoea and belly-ach at times harassed him. He took an anodyne at night.

7. At midnight the fever remitted. During the remission, head-ach; heat; thirst and cough were urgent. Two ounces of the decoction of bark, with ten grains of nitre in powder, were given him five times; and at bed time I gave him an anodyne, and renewed the blister. He was chilly at times through the day, and purged frequently.

8. Head-ach; great depression; giddiness and thirst were troublesome; the tongue seemed striped red and white; and was a little enlarged.—I gave him a camphire bolus of five grains every four hours; and nitre in his drink.

9. He passed the first part of the night ill from inquietude. A. m. he had an unrefreshing sleep, and afterwards rambled much. His voice became very rough, or harsh; his tongue was black; the teeth were covered with fordes; and he lost his taste. The countenance was fallow, and much bloated; his eyes were exceeding dull; the pulse was languid; and the skin was dry and hot—but he did not complain. I prescribed a drachm of the bark, one quarter of a grain of tartar emetic, and a drachm of tincture of snake root in three large spoonfuls of wine every hour. P. m. he spake in a wild manner; and the tongue was black; but the
pulse

pulse was firmer ; and the voice natural. His body was open.

10. There was a remission all night ; he slept towards morning, and afterwards had a copious stool. P. m. he was much better, having recovered his taste, and complained of universal pains. He continued his medicine as yesterday ; and took a camphire bolus at night.

11. He complained of universal foreness, and took his medicines with reluctance. P. m. his head sometimes ached, and sometimes he was giddy. He became uneasy, and desirous to sleep. The tongue was clean, but chapt ; and he continued better in every respect, having had two copious stools. I ordered him to repeat his medicine every three hours ; the anodyne bolus at night ; and nourishing diet.

12. He perspired and slept in the night, but denied it, and expressed a great desire to sleep. The tongue was dry, and rather black, with fordes about the teeth when he awoke. His body was open, and his countenance became enlivened. White specks appeared on the blistered part of the back, which discharged freely.—Five doses, each two ounces, of the decoction of bark, with half a drachm of the powder and one quarter of a grain of emetic tartar were administered ; and now and then a little wine. P. m. he continued recovering, but complained of
cough ;

cough; probably from being got on deck while the ship was smoking.

13. He had a tolerable night, but denied that he slept. He perspired freely, and had a copious stool. His bones ached, he said. He took his medicine four times; and the anodyne at night.

14. He rested well; his tongue healed and gradually became clean, and he perceptibly recovered; though he was not quite free of the fever until the 22d. The most evident symptom of fever about him when he awoke a. m. was a black vesicle on his tongue.

He continued to recover until the 30th, when he relapsed—with shivering and delirium. Perhaps from his bedding having been washed, and not thoroughly dried, by his messmates (without my knowledge): their excuse for having done it was because he was lousy. The symptoms most urgent now were pains of his side; universal pains; tooth-ach; and frequent chilliness. He was gently vomited and purged, and had a blister applied to his side. The decoction of bark was given after the same manner as before, and he continued to recover, though slowly, until the 37th day from his first attack, when he was sent to sick quarters at Halifax, for a change of air and diet.

CASE 2.

JAMES JOURD, aged about 29, a very irregular man, was seized the evening of the 28th of October 1776, with shivering for four hours, accompanied with sickness at stomach, retching, and severe head-ach; which were followed by heat, general uneasiness, and inquietude. When he complained on the 29th, he looked wild, and was much dejected. A vomit was immediately administered; and at bed time the sudorific bolus—with the infusion of mint ad libitum.

2. The ipecacuan. vomit purged as well as vomited him; and his head was relieved by profuse perspiration. But the anxiety and morbid countenance continued. Dysenteric symptoms also distressed him; and the pulse was quicker and harder than natural. I prescribed the decoction of bark four times a day, and the anodyne at bed time. P. m. he was hot; and the countenance appeared as if he had been drinking.

3. He passed an indifferent night from heat, thirst and inquietude; but the griping and purging were abated. With the decoction of bark I gave him one quarter of a grain of emetic tartar six times a day. P. m. he thought himself better; though he was still very feverish.

4. The

4. The purging was troublesome ; his skin was hot ; his thirst frequent ; and the pulse hard. Instead of the tartar emetic with the decoction of bark I ordered him half a grain of opium occasionally.— P. m. he was better.

5. He thought himself relieved, though he was very hot ; thirsty ; had a morbid countenance ; and voided porraceous stools. I ordered his medicine to be repeated as yesterday. P. m. his nose bled ; and the purging abated.

6. He had only two stools in the night, and rested well ; but his countenance still seemed greatly diseased. He was sick at the stomach, and retched at times from urgent cough ; his tongue was foul, and he had great thirst. His medicines were repeated— with a little wine and the tincture of bark alternately. P. m. he had no retching.

7. He was easy after a good night, but was still hot and thirsty, and his tongue was dusky in the middle. To two ounces of the bark decoction which he took five times a day, half a grain of tartar emetic was added to each dose ; and he continued to take the opiate occasionally. P. m. he complained of slight belly-ach at times. The camphire bolus and opiate were ordered at bed time, with diluent and refrigerant drink.

8. His countenance and tongue were extremely diseased ; he perspired irregularly ; his pulse was rather quick and small ; and he complained only of
being

being costive. One drachm of the powder, with two drachms of the tincture of bark, and a fourth of a grain of tartar emetic in a little water and syrup, was prescribed every two hours; and a blister was ordered to be applied between the shoulders. P. m. he was not relieved.

9. He perspired a little in the night, and had a stool in the morning. The tongue was enlarged, brown, and chapt. He took the decoction of bark and snake root every four hours, and a grain of opium at bed time. P. m. his pulse was quicker and irregular, though he always said he was better; and had several stools.

10. He had a stool; was delirious; and very restless the first part of the night. A. m. the pulse was more distinct, but weaker, and the skin was moderately cool. He lay on his back, as he had done the two preceding days, with his mouth wide open, by which means his tongue and throat became so dry, that he could not speak until they were moistened, and then scarcely intelligibly. He craved apples, which were allowed him ad libitum; and felt his blisters pain him. I prescribed his medicines, as on the preceding day. P. m. he had a stool; there was a black pellicle on the tongue; the pulse was irregular and quick; he had frequent startings; was greatly depressed; and was covered with petechiæ of different sizes and shapes. Two drachms of the bark, with the fourth of a grain of tartar

tartar emetic ; and occasionally twenty drops of Thebaïac tincture, in four spoonfuls of white wine, were administered every two hours.

11. He was much relieved after a good night ; he spake, and was in good spirits ; the pellicle, or rather the thick black crust, began to cast off the tongue, the pulse was firmer. He took the bark as prescribed yesterday afternoon. P. m. a most violent exacerbation came on, with deafness and an effusion of tears ; neither his mouth nor teeth could be kept clean ; the pulse was very small, and he was costive.—Camphor. gr. v. h. f. cepit. I suspected that his messmates had given him grog.

12. A slight remission, with more firmness of the pulse, and less ghastliness of countenance. He was costive, and always said he was better. A clyster was injected, and I gave him five-and-thirty drops of spirit of hartshorn in the decoction of snake root, every four hours. P. m. he had two stools, with hard lumps in the first ; a blackish and very tenacious stuff was coughed up with very great difficulty, but without complaining of any pain. He spake clearer, and the pulse became stronger. I gave him his bark with wine, and six grains of camphire at bed time.

13. He passed a good night, and was much relieved ; wherever the crust appeared, the tongue was very sore. P. m. the body was open, and the pulse full and quick.

14. There was a perfect remission after sleeping,

and perspiring freely in the night. The tongue was now much cleaner, but the crust separated very slowly. He took the wine and tartar emetic with his bark, and a very light diet. P. m. his body continued open, and he was cool and easy. The camphire was repeated at bed time.

15. He passed a good night; sweated; and had a stool, though he was disturbed by the ventilator. He continued his medicines, and used a gargle. P. m. a violent paroxysm was brought on, I suspected, by drinking grog. The countenance was flushed; the eyes were much inflamed; the pulse was rapid; tremours were distressing; and he frequently groaned.

16. He slept, and had a stool in the night. The skin was hot; the pulse was quick and irregular; and he spake indistinctly. The countenance was much diseased; he was again become a little deaf; and though he thought himself better, he was anxious to know if he should recover. Half a drachm of the Peruvian bark, and one-fourth of a grain of tartar emetic, was administered every four hours, in two ounces of the decoction of bark, to which Thebaic tincture were occasionally added. His wine was continued. P. m. the tongue was black; and he continued to groan, though he was inclined to sleep. The body was open. The camphire with an opiate was repeated at bed time.

17. He had two stools, and rested tolerably well in the night. He coughed and expectorated laudable
ble

ble pus ; and could now put out his tongue, which was blackish, and though the skin was cool, there was yet a disagreeable quickness in the pulse or febricula. His body was open ; and he ate some pancake which his messmates imprudently gave him. He continued all his medicines.

18. He rested ill from *aching of his bones* with lying in bed. The tongue had the pomegranate appearance, and the pulse was small and quick. The tartar emetic was omitted, and no other alteration of his medicines was made. P. m. he groaned without pain ; perspired freely ; and began to recover his appetite ; but still had many petechiæ on him.

19. He complained of hunger, after having had two stools, and passing a good night ; but one crust continued to succeed another on his tongue, which gradually became black, though the pulse was moderate ; and the skin cool. His medicines were continued.

20. His voice was now become natural, but the tongue was sore and black. I continued all his medicines as before. P. m. he was hot and uneasy, I believe from irregularity.

21. He was easy and cool, after having a stool, and perspiring in the night. The medicines, as prescribed the 18th, were still continued.

22. The tongue cleaned and healed slowly. The medicines were prescribed as before.

23. He continued to recover. I made no alteration of his medicines.

24. The pulse became quick, the skin was hot, the tongue and mouth were foul, perhaps from irregularity, but he expectorated laudable pus. The same medicines were continued, as prescribed the 18th.

He continued to recover, though slowly, becoming a little hot towards night; and taking his bark through the day, and his anodyne at night; until the 29th, when I sent him to sick quarters*.

CASE 3.

DANIEL WILKINS, a marine, aged about 28, a very irregular man, complained the 10th of Oct. 1776, of head-ach and purging. I immediately gave him an emetic; and an anodyne at bed time.

2. Gripping was most troublesome. I ordered him a dose of purging salts, and the anodyne at bed time.

3. He complained more of heat, thirst and head-ach, than of his bowels; and his pulse was fuller and quicker than natural. Ten grains of nitre in powder were given him four times a day in his drink.

* Such patients were sent to hospitals as cases of fever—though in a convalescent state; when they required nourishing food and change of air only.

4. The

4. The head-ach was still harassing. The nitre was continued, and the following draught administered at bed time: Three drachms of the tincture of bark; and one drachm of the tincture of snake root; with fifteen drops of the Thebaïac tincture in a little water and fyrup.

5. He had no complaint. P. m. his throat was a little inflamed.

6. The inflammation was much the same, with relaxation of the uvula; and he had no appetite. He took two ounces of decoction of the Peruvian bark, with five drops of elixir of vitriol, four times a day.

7. He was recovering. I gave him the same medicine as yesterday twice.

8. He returned to duty.

9. He was irregular yesterday, and relapsed at 2 p. m. but did not complain until this day p. m. of alternate chills and heats; of sickness at stomach; of head-ach; universal pains; heat; and great thirst. A vomit was immediately administered; and diluting drink afterwards.

10. The vomit operated upwards and downwards; but the head-ach continued. I repeated the bark four times, as on the 6th. P. m. he was not relieved. He took twenty drops of Thebaïac tincture, with half a grain of tartar emetic, in a little water and fyrup at bed time.

11. His head-ach remitted in the night. I ordered

dered the same medicines as yesterday. A paroxysm returned at 4 p. m. with pain of the limbs.

12. The head-ach continued with giddiness and cough. He took two ounces of decoction of bark, and one-fourth of a grain of tartar emetic four times a day; with nitre dissolved in his drink. I ordered a blister to be applied between his shoulders. P. m. no remission.

13. He was relieved; was easy and cool. His medicines were continued.

14. On recovery. He took his medicines, with elixir of vitriol instead of tartar emetic. From 9 a. m. to 6 p. m. he was chilly and giddy.

15. He complained of debility and universal soreness. No alteration was made in his medicine.

16. On recovery. He continued his bark and elixir of vitriol, P. m. he was irregular.

17. He continued to recover. No alteration of his medicine. At 5 p. m. he became chilly, and his head-ach returned. I ordered an half grain of tartar emetic at bed time.

18. He became easy at midnight. He still continued to take the decoction of bark with elixir of vitriol.

19. He was hot in the night. The itch-like eruption had been troublesome for some time. He continued his medicines.

20. He was recovering. The decoction of bark, with elixir of vitriol, was administered twice a day.

P. m.

P. m. a paroxysm came on. He took half a grain of tartar emetic at bed time.

21. About midnight there was a remission; with debility. I ordered the decoction of bark to be given him, with elixir of vitriol, four times a day: P. m. sickness at stomach, head-ach, and universal pains returned. An anodyne was given to him at bed time.

22. He rested well the fore part of the night; but complained of weakness; giddiness; and sickness at stomach. His pulse was quick and feeble. He was ordered six doses of the decoction of bark; and half a grain of opium to be taken occasionally. P. m. no remission, and diarrhoea was troublesome. A blister was applied between the shoulders; and five grains of salt of hartshorn, with half a grain of opium, were administered in a pill at bed time; and infusion of mint ad libitum.

23. A slight remission, though he was disturbed in the night. A. m. he did not sweat, and the thirst continued. Four doses of the decoction of bark, with half a grain of tartar emetic in each, were prescribed. P. m. he was relieved; after being chilly all day.

24. He complained less of head-ach; but his skin was hot; his thirst urgent; his pulse was quick and small, and he was greatly depressed. The medicines were continued. P. m. an exacerbation came on, and his head was confused and disturbed.

25. He was not relieved. An urgent cough and thirst harassed him ; his tongue was dry and white, and he was very feeble. I gave him half a drachm of the powder in two ounces of the decoction of bark, four times a day.

26. He rested ill, from lying in a bad berth, and complained of much pain and foreness about his breast, especially when he coughed ; but the pulse was moderate. An emollient linctus, with nitre and tartar emetic in a small quantity were given four times a day ; besides one drachm of bark in powder, in an ounce and a half of red wine as the vehicle. P. m. he vomited twice from the linctus. The nitre was therefore omitted.

27. He passed a good night, having perspired freely ; and having had a copious stool. A remission of the symptoms. P. m. a slight exacerbation, but he was sick from sitting up in his hammacoe. He continued his medicines.

28. He had a quiet night, but was very languid ; dejected ; and looked wild. His body was lax. Two quarts of vinegar, with an ounce and an half of Virginia snake root in coarse powder, were boiled down to one quart ; and, towards the end of boiling, an ounce of bark, in powder, was added, and four ounces of syrup were mixed in the strained decoction*, of which two spoonfuls were given every

* This is a decoction of Dr. Lind's. See his Dissertation on Fevers and Infection, chap. I. sect. 2.

four hours; a little wine frequently; and an opiate at night. P. m. his skin was cooler and softer, but the pulse was languid; and he was frequently purged. His medicines were continued.

29. He complained of weakness and of the itching eruption only; but the countenance was much diseased; and his tongue had the pomegranate appearance. He had four stools in the day, and was not relieved. I ordered him four spoonfuls of red port wine, with a drachm of the powder of bark; a quarter of a grain of tartar emetic; and twenty drops of the Thebaïac tincture every two hours. P. m. he craved and was indulged with apples. The Thebaïac tincture was only repeated occasionally.

30. He complained only of his blister and thirst; but the morbid countenance continued; as well as the diarrhœa. His pulse was feeble. P. m. the diarrhœa still continued, but his tongue was clean. He became somewhat deaf. All his medicines were continued.

31. He still looked wild; was thirsty; and craved different things. I ordered his draught to be given him every four hours. P. m. the diarrhœa continued, his lips were regaining their natural colour, but he was otherwise quite fallow. His anodyne was repeated at bed time.

32. The diarrhœa harassed him in the night, and he was thirsty. I gave him his medicine, as I did yesterday.

yesterday. P. m. he was much the same. To his anodyne at bed time, six grains of camphire were added.

33. He passed a tolerable night, and complained little, though he was thirsty, and looked wild. He continued his medicines. P. m. he had four stools in the day. His anodyne, with camphire, was repeated again at bed time.

34. His countenance was not improved; and he complained of thirst and deafness. The tongue was white. His medicine was continued. P. m. the diarrhœa was yet troublesome. The camphire, with the anodyne, was repeated at bed time.

35. He did not sleep he said; but was quiet in the night. He continued in the use of his medicine. P. m. the diarrhœa continued, and he dozed. His anodyne and camphire were repeated at bed time.

36. He had a good night; and had no complaint in the morning; though his pulse was feeble. His countenance was diseased; his tongue was brown; and he dozed at times. His medicine was again ordered every two hours, as on the 29th in the afternoon. P. m. no alteration. The anodyne and camphire were repeated at bed time.

37. His cough disturbed him in the night. He complained of debility; of pains in the hips; and expectorated pretty freely in the morning. He took his medicine, without tartar emetic. P. m. he began
to

to look better, but his cough was now urgent. He repeated his anodyne at bed time.

38. He passed an indifferent night; and the cough and expectoration continued. I ordered two scruples in powder, in two ounces of the decoction of bark four times a day; and the anodyne at bed time; and also his wine to be continued.

39. The cough and expectoration continued, and he had two stools in the night. Towards morning, he raved; and looked wild: when asked how he was? he answered, bawling, *he was brave*; starting up at the same time. I omitted his medicines, and gave him only a little wine every two hours. P. m. he said his feet and legs had been cold the last twenty-four hours. A pediluvium was ordered in the evening, and his anodyne at bed time.

40. He passed a restless night from inquietude and raving; he was greatly emaciated; and was become lousy. He took his wine every three hours; his bark, as it was prescribed on the 38th, four times a day; repeated the pediluvium in the evening; and the anodyne at bed time.

41. He rested badly from raving; but slept a. m. The expectoration, with cough and craving, continued inordinate. P. m. the cough was troublesome; but his appetite began to return. I prescribed for him, as I did yesterday.

42. He had a good night, and perspired. He
looked

looked better; his pulse was firmer; and his skin warm. No alteration was made in his medicines. P. m. he continued better.

43. He continued to recover, but found the eruption still troublesome. The same medicines were prescribed for him as on the 39th.

44. He was recovering. His medicines were continued.

45. He recovered slowly. No alteration of his medicine was made.

46. He continued to recover. He also continued his medicines.

47. He was still recovering; and went on with his medicines.

48. I sent him to sick quarters for the same reason I had sent Lawfon and Jourd,

CASE 4.

WILLIAM HURD, aged about 25, of a thin habit, was seized the 11th of October, 1776, with head-ach, puking, and universal pains. I ordered him a vomit.

2. He complained much less; and the vomiting had ceased. He took an ounce of purging salts.

3. His head was still affected; though he had sweated the two nights past. He was ordered ten grains of nitre four times a day; and for a night draught, three drachms of tincture of bark; one
drachm

drachm of the tincture of snake root; and twelve drops of Thebaïac tincture.

4. He slept in the night; but, a. m. complained in the morning of more head-ach; of pain about his eyes; of heat; thirst; and of his urine smelling strong. His skin was dry, and his pulse quick and small. Four times a day a drachm of bark in powder, with six drops of elixir of vitriol in a little water, was given him with sub-acid drink at pleasure. P. m. he was not relieved.

5. He was much relieved after having passed a good night; but his head-ach still harassed him, and he was feeble. I prescribed two ounces of the decoction of bark four times; with light thin diet. P. m. the paroxysm continued twenty-four hours.

6. On recovery. I prescribed the same as yesterday.

7. He complained of weakness. He continued to take his decoction. P. m. he became hot, thirsty, and felt his head light. A quarter of a grain of tartar emetic was given in the last dose of the decoction.

8. There was a remission at midnight. He took his decoction of bark as before. P. m. he complained of weakness only.

9. He passed a good night, and was easy. No alteration was made in his medicine.

10. He was recovering. The decoction was continued as before.

11. He

11. He was feeble. He continued in the use of the decoction of bark.

12. He recovered.

CASE 5.

JOHN DANCE, aged about 30; of a bloated habit; and having venereal eruptions; complained the 12th of October of head-ach; sickness at stomach; universal pains, and severe gripes. I gave him an emetic.

2. His head was still much affected. He took the purging salts. P.m. three drachms of tincture of bark; one drachm of the tincture of Virginian snake root, with fifteen drops of Thebaïac tincture were given in a little simple water and sugar at bed time.

3. He was relieved in the night of pain in and about the left eye, which had affected him some time; but he complained of griping and purging. I gave him a drachm of the bark in simple water four times a day. P.m. he was much better.

4. The dysenteric symptoms were now effectually relieved, and he was recovering. I prescribed the decoction, with the powder of bark as yesterday, four times.

5. He continued to recover. He took the decoction of bark four times. P.m. a paroxysm came on with heat and thirst.

6. He passed an indifferent night from fever and head-

head-ach. He persisted in taking his bark. At 8 p.m. he was much relieved. The paroxysm continued about 12 hours.

7. His lower extremities were painful though he sweated profusely in the night. No alteration was made in his medicines. P.m. the perspiration continued all day, and he found himself feeble.

8. He was easy, but continued to sweat. He took elixir of vitriol with the decoction of bark. At 10 this morning a paroxysm returned, with shivering, and he was chilly all day. To each dose of the decoction, half a grain of tartar emetic was added.

9. At 8 last night the paroxysm remitted; but the forehead ached; and he was giddy. He took the decoction of bark as before. P.m. he had an exacerbation of head-ach for three hours.

10. At 7 a.m. an exacerbation of head-ach came on. The decoction of the bark with tartar emetic was administered four times as before. P.m. the head-ach continued to harass him.

11. The head-ach remitted at 8 last night; and in the morning he continued easy after a good night. He continued to take the decoction of bark four times a day.

12. He was recovering. No alteration was made of his medicine. He thought himself a little chilly
in

in the forenoon ; but had no other symptom of fever on him.

13. He returned to duty.

CASE 6.

WILLIAM FOLKES, aged about 32, was seized the evening of the 13th of October, with chilliness, which was succeeded by heat, and profuse sweat. During which he became chilly again ; and complained of head-ach, lumbago, and thirst. His skin was hot ; and his pulse was quicker than natural. I gave him a vomit.

2. He complained of the head-ach being very severe ; but otherwise he was relieved. He took a dose of the Epsom salts.

3. He complained of head-ach and thirst. I ordered him an ounce and a half of the decoction of bark, and six drops of elixir of vitriol four times a day.

4. His head-ach continued. His medicine was repeated. P. m. his left ear became painful.

5. An exacerbation commenced at 8 last night, which remitted to day about noon ; but the heat and thirst continued. He continued his medicine.

6. Yesterday, in the evening, an exacerbation returned, which remitted about midnight. He took his medicine as before. P. m. the head-ach was trouble-

troublesome at times, particularly in the left side of the head.

7. The head-ach remitted at midnight. No alteration of his medicine. P. m. the usual exacerbation returned.

8. His head was still affected, especially towards night. I repeated his medicine.

9. He recovered very slowly. His medicine was repeated. P. m. he continued to recover, but complained of cough.

10. He was recovering. He continued to take his medicine.

11. He recovered.

In four days he relapsed, and was much worse than before. I treated him as I had done formerly, only that he took the decoction of bark oftener, and ʒss. of the powder with every dose. On the 27th day from his being first seized, he was pretty well recovered, when I sent him to sick quarters for the reason I sent the patients before.

CASE 7.

M. L., aged about 20 (who was infected by a sick messmate), complained of pain of his back; of lassitude; debility; and of loss of appetite. Oct. 21, he was seized with head-ach and sickness at stomach; and his pulse was quick; and rather hard. I gave

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him a vomit immediately ; and a sudorific draught at bed time.

2. He found himself relieved after perspiring in the night. I ordered him a dose of the Epsom salts, and repeated the sudorific draught at night. P.m. he neglected to take the salts, and an exacerbation came on. I applied a blister between the shoulders.

3. He complained greatly of head-ach, and was much depressed. The Epsom salts with crystals of tartar were repeated. P.m. a remission came on.

4. He had a pain, at times, over one or the other of his eyes ; he was feeble and dejected ; and his pulse varied. Two ounces of the decoction of bark, and ten grains of nitre were administered four times a day. P.m. there was no alteration.

5. The pain affected the right side of the head, eye, and neck, darting through to the left temple upon turning his head ; and he was costive. He took half an ounce of Epsom salts ; and afterwards, the same medicine as he did yesterday. P.m. the pain continued.

6. His head continued to ach on turning it round. I ordered eleven drops of elixir of vitriol with the decoction of bark, instead of nitre, four times a day. P.m. he complained of more head-ach, after drinking a little grog. He made use of the pediluvium at bed time.

7. The head-ach ; debility ; and dejection still continued. He continued his medicines.

8. There

8. There was no alteration, and he was costive. His medicine was repeated with a gentle aperient.

9. He complained much of head-ach at times, preceded by stiffness of his neck. I ordered him the bark with nitre four times a day, and a little wine every now and then.

10. An exacerbation of his head-ach returned at 4 a. m. without the stiff neck. I gave him the decoction of bark six times a day, and a quarter of a grain of tartar emetic occasionally. P. m. there was a remission at noon, and he was feeble and giddy.

11. He was easier, but complained of pains in his joints, and sickness at stomach. The elixir of vitriol was again ordered with the decoction of bark.

12. The sickness continued, with an uneasy sensation about the præcordia, and pain of the neck. I gave him five grains of ipecacuan powder. P. m. he was much relieved by the emetic. Five grains of salt of hartshorn and half a grain of opium, in a bolus, were administered at bed time.

13. An exacerbation of head-ach returned at midnight, and his joints were feeble. He took his bark six times; and continued his wine.

14. He complained of heaviness, giddiness, debility, and depression. His medicine was repeated as on yesterday. P. m. an exacerbation of head-ach came on. I ordered an anodyne for him at bed time.

15. He passed a bad night from violent head-ach; fore throat, which had been troublesome for two days before, though he did not mention it, and from great depression. A blister was applied between his shoulders; and four grains of camphire; with one-fourth of a grain of tartar emetic in a bolus were prescribed every four hours, and two ounces of the decoction of bark to wash it down. His wine was also continued. A. m. he felt himself rather cold. P. m. he was relieved.

16. He was hot; thirsty; and costive. I gave him half a drachm of rhubarb. P. m. he was easy, but his skin was hot, and his pulse quicker than natural.

17. An exacerbation of head-ach; with heat and thirst came on; and also with much depression of spirits, and uneasiness at the scrobiculus cordis. His tongue was fore and streaked black. Two spoonfuls of the decoction of snake-root and bark, prescribed on the 28th day of case 3, was ordered every four hours, with a little wine occasionally. P. m. his pulse was quick, irregular, and accompanied with tremours; the skin was hot, and impressed a disagreeable sensation on the fingers; and he was sick at stomach.

18. He sweated; but passed the night ill from sickness, retching, and gripes. However a remission came on, and the blister discharged freely. One drachm of bark in powder; and one-fourth of a grain

grain of tartar emetic, with fifteen drops of Thebaïac tincture in two ounces, or four spoonfuls of wine, were ordered every two hours. P. m. he was much griped and costive. Being averse to receive a clyster, he took half an ounce of salts. The bark and wine were continued throughout the night.

19. He passed the night indifferently, from pain of his back. He took his bark every three hours. P. m. he had very little sickness at stomach, and was in good spirits.

20. His tongue was foul; he was thirsty when he awoke; and complained of debility. The blistered part pained him. He took his bark and wine every four hours; and an anodyne at bed time.

21. He was recovering, but his neck pained him a little. He continued to take his medicines.

22. He continued to recover. His medicine was continued thrice a day.

23. He was feeble. The bark twice a day with the wine, and suitable diet were continued.

He continued to recover, though slowly, and followed the same regimen until the 28th of his illness, when he was sent on duty.

CASE 8.

WILLIAM ELLIOT, a marine, aged about thirty-two, a strong man, whose berth was contiguous to a person ill of fever, was seized on the morning of

the 14th of November with chilliness; head-ach; and lumbago; and afterwards with alternate chills and heats; his pulse being somewhat quicker and harder than natural. He took a vomit immediately; and at bed time five grains of salt of hartshorn with half a grain of opium; and an infusion of mint at pleasure throughout the night.

2. He was somewhat relieved by free perspiration in the night; and two moderate stools. The tongue was white. He took an ounce of Epsom salts. P. m. he complained of alternate heats and chills; of universal pains; head-ach; and thirst: his skin was hot and dry; and he was much dejected. A blister was applied between the shoulders; and the sudorific bolus repeated at bed time.

3. He passed a restless night from head-ach; from pain over the eyes; lumbago; *flying pains*; and urgent thirst. He perspired freely, and the pulse was moderate; but his tongue continued foul. He was ordered two spoonfuls of the snake-root and bark decoction*, with thirty-five drops of spirit of hartshorn, every four hours. P. m. he had a very copious stool; and was giddy.

4. He complained of head-ach, but more especially of pain about his eyes; of pains in his left side and back; of an ill taste in his mouth; and that his tongue was foul. I gave him six drachms

* Vide Case 3, 28th day.

of the purging salts. P. m. the medicine operated, but a violent exacerbation, with vehement head-ach, came on. *His eyes were ready to start out of his head.* His medicine prescribed yesterday, was ordered every three hours without the spirit of hartshorn.

5. He sweated, and the head-ach remitted about midnight. His lumbago and dysuria, probably from the blister, were troublesome; and his tongue continued very foul. I ordered one drachm of the powder in two ounces of the decoction of bark; with a fourth of a grain of tartar emetic every two hours. P. m. an exacerbation began at 10 a. m. with violent shooting pain of the left side, but he felt less lumbago and head-ach. His bowels were lax. I repeated the sudorific bolus at bed time.

6. The exacerbation remitted with perspiration at midnight. His bowels were affected at times by the pain of his side. His medicines were ordered to be repeated. P. m. an exacerbation began at 2 p. m. during which the head-ach was the most severe symptom. He coughed; but the body continued lax. He took his bolus at night.

7. A remission commenced at midnight. He complained of the back part of his head and neck being painful: and the diarrhœa continued moderate. He continued his medicines; and the anodyne bolus at night. At 1 p. m. a paroxysm came on.

8. The remission began as usual about midnight, and terminated with free perspiration ; but he still complained of his side. No alteration of his medicine was made. P. m. he had a slight paroxysm between four and six.

9. At three this morning a slight paroxysm, which terminated in the forenoon by perspiration, came on. His medicine was prescribed morning and evening as on the 5th.

10. A paroxysm returned at three this morning, with pain of the side ; thirst ; and heat ; which went off by perspiration. His medicine was repeated as yesterday. P. m. he complained of head-ach. I ordered the medicine to be repeated every six hours only.

11. He sweated profusely at night, and had three stools. He now began to recover strength, though slowly. He took the powder in the decoction of bark twice a day ; and an anodyne at bed time.

12. He sweated profusely, and had a restless night. No alteration was made of his medicine.

13. He was sent to sick quarters, in a fair way to recover. He, as well as the other patients whose cases have been related, all soon recovered.

CASE 9.

JOHN AUDLEY, aged about 30, a strong man and irregular at times, was seized the evening of the

the 22d of Dec. 1776, with shivering, head-ach, and universal pains, particularly in his side. An emetic was administered immediately; and of Thebaid tincture, and essence of antimony, each thirty drops in an infusion of mint at bed time, with the infusion to drink at pleasure were ordered.

2. He perspired in the night, and was a little easier. I gave him an ounce of the Epsom salts, with two drachms of crystals of tartar. P. m. he complained more of his side. A blister was applied to his side; and the sudorific draught repeated at bed time.

3. He was relieved of pain, but his countenance was much diseased. One-fourth of a grain of emetic tartar was given every four hours, in four spoonfuls of the bark decoction. P. m. he complained of severe cough. I repeated his anodyne, or sudorific, at bed time.

4. At eight last night a paroxysm came on, during which heat and thirst were great; the cough was urgent; and respiration laborious. His bark was continued as yesterday every two hours. At 10 a. m. the paroxysm remitted; and he was easy p. m.

5. A paroxysm returned last night, but I could not learn at what time. He rested ill from inquietude; cough; pain of his side; and dyspnoea. A. m. he wandered; breathed with much difficulty; looked ghastly; and in the afternoon mut-
tered

tered or sung inarticulately. Four spoonfuls of a cordial julep were given every two hours ; and the blister on his side was renewed.

At six p. m. he died*.

* This is the only case out of 216 wherein the bark can be said to have failed ; and had it been given earlier, in substance, as it certainly would have been given, had danger been apprehended, and I had had bark to have given him, he might perhaps have recovered.

CHAPTER XIV.

Method of Treatment with Antimonials, Camphire, Blisters, &c.

THE same evacuations were now procured, and after the same manner, as in the bark treatment; except letting blood, which I had entirely left off, unless there appeared an absolute necessity for it*. The patients enjoyed every other advantage, and in a greater degree than they had done under the bark method of treatment,—as apples, oranges, limes, and wine, which we got out of a prize. The natural evacuations were carefully attended to; consequently they were checked when excessive; and promoted when they were suppressed. Blisters were now applied as freely as formerly. The camphire and tartar emetic were generally prescribed as in the following mixture, which was styled the febrifuge mixture. Take of camphire a drachm and a half; emetic tartar eight grains; refined sugar two drachms and a half. Grind them well

* The bark method of treatment preceded the following method, so that none of the patients who were treated after this manner were let blood in the beginning of the fever, except Wm. James, a marine, one of the first of those who were seized with the fever, while it was indetermined with myself that we had contracted infection.

together,

together, and then add gradually while triturating thirty ounces of thin decoction of sago. To which occasionally were added two drachms and a half of nitre in powder. The dose of the mixture from one to four spoonfuls*.

In a few cases, from twenty to thirty grains of theriac, with three grains of camphire, was administered every six or eight hours, instead of the mixture; and in some of the cases the tartar emetic and nitre were given without camphire.

* *Mixtura Febrifuga.*

℞ Camphor. ʒ iss.

Tart. emet. gr. viij.

Sacchari albiss. ʒ ijss.

terantur bene simul, deinde gradatim sago adde* tenuissimi uncias triginta ut f. mixtura; cui ut visum etiam adde sal. nitr. pulv. ʒ ijss—cujus dosis cochlearia—iv. omni hora; vel duabus; vel tertiis; vel quartis; vel quintis; vel sextis; vel septimis; vel octavis horis pro renata.

* This suspended the camphire as well as a solution of gum arabic could have done.

CHAPTER XV.

*Cases of Fever treated with Antimonials, Camphire,
Blisters, &c.*

CASE 10.

WM. JAMES, marine, aged about 36, naturally slothful and given to tippling; was seized on the 5th of October 1776 with head-ach; thirst; pain of the left eye when he looked at any object; and giddiness; but he did not complain until the 6th. His pulse was rather quick and full. Twelve ounces of blood, were ordered to be taken from his arm; and a mild cathartic administered two hours after. But he became faint, and lost very little blood.

3. He complained of no particular symptoms; but that he was weak and faint; which I imputed to his natural indolence. I ordered twenty drops of elixir of vitriol to be given him twice a day in a little water.

4. He was still faint and complained of diarrhœa. I gave him in a bolus, three grains of ipecacuan powder, and half a grain of opium four times a day.

5. His

5. His complaints were numerous; he had an ague in the night, and said he had bilious vomiting in the morning. He took half a grain of tartar emetic every two hours.

6. He was seized with vomiting, and purging. He took his medicine prescribed on the 4th.

7. He still complained of weakness; but from his bad character, and so little appearance of disease about him, I suspected that his illness, in a great measure, was feigned. I gave him an ounce and half of the tincture of bark with five drops of elixir of vitriol, in a little water twice a day; and some portable soup occasionally.

8. I was informed he had been delirious in the night. He continued restless in the morning; his pulse was small and slow; and his skin rather cold. I ordered him a spoonful of cordial julep frequently, and wine in his sago; blisters were also applied between his shoulders and to his ancles. P. m. he perspired, but wandered at times, and complained of weakness only.

9. He died this morning.

The few patients who had slight fever before this man, having been relieved by very simple means, I did not think that infection had been brought on board, or that he was in danger, until the 8th, when it was too late to relieve him.

CASE 11.

WM. HARDIE, aged about 22, was seized the 12th of January 1777, about noon, with shivering; head-ach; and universal pains. He took a vomit immediately.

2. He complained much of debility; giddiness; and thirst. His tongue was foul. P. m. his left ear ached; and discharged freely. I gave him an opening draught; and applied a blister between his shoulders. Towards night he became speechless; delirious; and his face was distorted. A sudorific and an opiate were administered at night. About two hours and a half after taking his medicines he became quiet, and apparently slept; but the delirium returned more violent at midnight; and notwithstanding the opiate was repeated, he continued delirious, and died at three p. m. the third day; having been scarcely 48 hours ill *.

CASE 12.

JOHN BIRRIDGE, aged about 40, was affected with shivering; head-ach; retching and vomiting,

* Query.—Could the discharge from the blister have suppressed the discharge from the ear, and, in any respect, have occasioned the patient's death? I think not.

Is it not more probable that the pus found a way to discharge itself internally, which might occasion all the nervous affections?

several

several days before. He complained the 19th of Feb. 1778, of being hot and cold alternately; and of great debility. The pulse was quicker, and the skin hotter than natural. Emet. statim cepit.

2. Thirst was urgent in the night; and a severe pain seized his left side, with frequent cough, which increased the head-ach. Two spoonfuls of the febrifuge mixture were prescribed every two hours. P. m. his countenance was wild, he wandered, had tremours at times, complained of great langour, giddiness, and incessant thirst. His stools were watery. I applied a blister between his shoulders; and gave him twenty grains of theriac. andromach. with three grains of camphire every eight hours.

3. Partial, momentary sweats through the night, which yielded no relief. His medicines were repeated as yesterday. P. m. the watery stools continued, and petechiæ appeared.

4. He rested ill from wandering and inquietude, the skin was hot, the pulse small, the tongue whitish, and he was costive. He continued his medicine, and a clyster was injected. P. m. no better.

5. He continued to ramble, his countenance was footy; he complained of heaviness about the heart, and thirst; though the pulse was moderate, and his body open. The medicines prescribed the 2d. were continued, and wine allowed him. P. m. great pain about the scrobiculus cordis, from incessant cough, which brought up phlegm only. I applied

plied a blister to his breast, and gave him an anodyne at bed time.

6. He had no tremours nor catchings in the night, and found himself relieved. His blisters pained him; and his tongue was white. He took the medicines and wine as yesterday; with nourishing diet.

7. Last night the rambling and inquietude returned. The delirium increased, and he complained of cold. I ordered him, besides the febrifuge mixture, half a drachm of theriac. androm. with two grains of camphire every six hours. P. m. he became gradually worse; the countenance was ghastly; the pulse became very feeble; the tongue brown; and rattling in his throat. He was costive. A clyster was therefore injected.

8. He rested ill from groaning and inquietude, and had two stools in the night. His pulse was imperceptible at times; he rolled his eyes about, and turned them up in the delirium. I prescribed one drachm of Peruvian bark; and one quarter of a grain of tartar emetic, in three spoonfuls of red wine every two hours: but he took only one draught, and died at 7 p. m.

CASE 13.

THOMAS BAKER, a prisoner taken coming home from the West Indies, and had been ill on the

passage ; was coſtive five days before he complained, but gave a very unfatisfactory account of his illneſs. An hæmorrhage from the noſe the 29th March, 1777, the preceding day of his complaining, had relieved his head-ach. The 30th, when he complained, his countenance was fallow, and much diſeaſed ; he felt univerſal foreneſs and pain about the ſcrobiculus cordis ; the pulſe was quick but ſmall, and the tongue white. He immediately took an ounce of Epsom ſalts, which gave him ſeveral ſtools ; and afterwards he took three ſpoonfuls of the febrifuge mixture four times a day.

2. The pain about the ſcrobiculus cordis was relieved, and the pulſe was more moderate ; but the univerſal foreneſs continued. I preſcribed the mixture every three hours.

3. Severe head-ach, uneaſineſs and thirſt haraſſed him ; and his pulſe was ſtill quick. No alteration was made of his medicine. P. m. he was greatly dejected, and breathed unnaturally through his noſe. I gave him a theriac bolus of twenty-five grains, with two grains of camphire every eight hours ; and applied a bliſter between his ſhoulders.

4. He paſſed the night very ill from inquietude and delirium ; his reſpiration ſtill unnatural, and his countenance ghafly. I gave him the medicine, preſcribed yeſterday afternoon, every ſix hours. At 1 p. m. he died. I was informed that he had a fever not long before on board the ſloop he came from ;

from; and that the master died of it on the passage from the West Indies. The man was in a lifeless and desponding state before I saw him. The thoughts of his being a prisoner might add to his depression, though he was as well treated as our own men.

CASE 14.

ANTHONY GAFFORD, aged about 23, a strong man, rather intemperate, was seized the 12th of March, 1777, with shivering, head-ach, sickness at stomach, and universal pains, especially of the loins, but did not complain until the 13th. I ordered the vomit to be given him immediately; and five grains of salt of hartshorn, with half a grain of opium at bed time.

2. He passed a restless night from coughing; the head-ach continued, his tongue was foul, and his pulse quick. The purging salts were given him in the morning, and afterwards four spoonfuls of the febrifuge mixture four times a day. P. m. he complained of universal foreness.

3. The cough disturbed him much in the night. His pulse and head-ach were now moderate. He continued to take the febrifuge mixture as prescribed yesterday. P. m. no alteration.

4. His head was much affected in the night, by cough, accompanied with an exacerbation of heat and
 Q 2 quickness

quickness of pulse. I suspected he had been irregular. No alteration was made of his medicine.

5. He passed the night ill from pain in the left side, which the cough increased; he was very restless and complained of thirst; and the teeth were covered with fordes. He continued his mixture; and made use of an emollient linctus for his cough occasionally. The blister was also renewed.

6. Cough, inquietude, and rambling prevented sleep; respiration became laborious; the tongue was black; and the pulse imperceptible. A drachm of bark in powder, with a quarter of a grain of tartar emetic in two ounces of wine, was ordered to be administered every three hours. He took only one, or two doses. At 1 p. m. he died.

CASE 15.

WM. WATKINS, aged about 37, was seized on the 13th of April, 1777, with violent head-ach; sickness at stomach; and lumbago. He was also subject to fits, he said. He took an emetic immediately, and a sudorific bolus at bed time.

2. He was not relieved; the back part of his head ached chiefly. I ordered him a dose of salts; and the sudorific bolus to be repeated at night.

3. The head-ach still continued. A blister was applied

applied between his shoulders; and a dose of the febrifuge mixture was given to him four times.

4. He was very hoarse, and had an urgent cough. His medicine was repeated as yesterday.

5. No alteration for the better. His pulse being full and the head-ach not relieved—eight ounces of blood were ordered to be let from his arm; the febrifuge mixture was repeated as yesterday; and the anodyne at bed time.

6. He complained of swelling of the abdomen, and of griping disturbing him in the night. An ounce of Epsom salts was given to him; and the febrifuge mixture repeated as before. P. m. he had no complaint; but his countenance was wild; and his pulse quick. At bed time four grains of camphire, and half a grain of opium were given.

7. He began to rave, and became very restless at midnight. The delirium continued through the day, and he looked at his fingers. He continued his mixture. P. m. an effusion of tears. At bed time he took the bolus of camphire and opium; and blisters were applied to his arms.

8. The delirium abated, and he passed the night quieter; but his countenance was diseased, his respiration short, and the pulse was small. I ordered twenty grains of theriac, and three grains of camphire every six hours for him. P. m. no alteration, only the cough was more urgent. The bolus was repeated at bed time as on the 6th.

9. He passed a restless night from increased delirium; the countenance was ghastly, and the tongue brownish. No alteration was made in his medicines; and blisters were applied to his ankles. P. m. he was comatose and delirious alternately; and voided involuntary stools for some days.

10. The blisters were neglected to be applied yesterday; the pulse was not perceptible; the tongue was black; and his teeth were covered with fordes. I continued his medicines.

11. He was quieter and rational at times; but was quite languid, and the pulse scarce perceptible. The medicines were continued. At 7 p. m. he died.

CASE 16.

STEPHEN HUTCHINS, aged about 38, on the 19th of Dec 1777 was seized with shivering; with bad taste in his mouth; head-ach; lumbago; with pain, and sensation of swelling about the epigastric region; but did not complain till the 20th. The emetic was administered immediately. The emetic operated by vomit and stool. At bed time I ordered of tartar emetic and opium each half a grain, in a bolus.

2. His head-ach and pain in the back were relieved by perspiration in the night; but he was harassed with urgent cough, and soreness at his stomach,

mach. The febrifuge mixture was given him three times; an emollient linctus to take when the cough was urgent; and at bed time the same bolus as he took last night.

3. He passed the night ill from inquietude; and the cough, head-ach and lumbago distressed him at times; he was chilly and hot alternately; the tongue was red in the middle, and thirst was troublesome. I ordered the febrifuge mixture to be given to him four times; and the anodyne at bed time. About 2 in the afternoon he had a slight remission.

4. About 10 last night an exacerbation came on with tinitus aurium, soreness and entire deafness of the left ear, which had been somewhat painful for two days. The pulse was slower than natural; and the countenance was fallow and diseased. I repeated the mixture; the linctus; and anodyne at bed time.

5. He complained most of his ear and deafness. No alteration of his medicines.

6. An exacerbation came on about 10 last night, with great pain at the scrobiculus cordis, which surrounded the thorax; he had a teasing cough; an unnatural respiration, and was much depressed. To each dose of his febrifuge mixture a drachm of the tincture of snake-root was added at 11 a. m. and 4 p. m.; the linctus and anodyne were continued; and a blister was applied to the right side.

7. At 8 a. m. an excruciating pain seized the right side after he had passed a very restless night.

His febrifuge mixture was repeated every three hours with an opiate occasionally ; the side was embrocated with volatile liniment ; a clyster was injected ; and four ounces of blood were let from his arm. P. m. no remission ; the part was swelled and tense ; the breathing laborious ; the alæ of the nose were distended ; the face was flushed, and covered with sweat ; and the pulse was small.

8. After repeating the clyster three times he had a stool, with great flatulencies, which relieved him, and soon after several white frothy stools. However, he passed an indifferent night from the pain, hardness, and swelling, which still continued. Rattling in his throat was observed in his sleep. He was faintish in the morning when taken out of bed, but revived again, and held out very well to sick quarters, where he died some time after.

Although wine has not been mentioned regularly in the management of my patients, I never omitted giving it when I had it, wherever I saw it proper,

CHAPTER XVI.

COMPARATIVE TABLES,

TABLE I.

Shews the superior Efficacy of Peruvian Bark to other Medicines administered in Fever on board the Juno.

Treated with Bark on Board		Treated with other Medicines on Board	
Fever Patients	Deaths	Fever Patients	Deaths
216	1	296	6
Proportion of Deaths $\frac{1}{216}$		Proportion of Deaths $\frac{1}{49}$ nearly	

TABLE II.

Shews the Success of the Methods of treating the Juno's Fever Patients at New-York and Rhode Island Hospitals.

Sent to New York Hospital, and treated with camphire, &c.		Sent to Rhode Island Hospital, and treated with Antimonials, &c.	
Fever patients	Deaths	Fever patients	Deaths
36*	5†	26‡	4§
Proportion of Deaths $\frac{1}{7}$ nearly		Proportion of Deaths, more than $\frac{1}{7}$	

* Of whom 15 were convalescents.

† Of whom 4 were convalescents; when sent.

‡ Of whom several went from a prize without my seeing them.

§ Of whom one was sent from a prize without my seeing him.

TABLE

TABLE III.

Shews the Proportion of Deaths under the different Methods of managing the Fever on Board the Juno.

Treated with Bark, on Board		Fever Patients belonging to the Juno treated without Bark on Board; at New York; and Rhode Island Hospitals	
216* Patients	1 Death	296 Patients	16 Deaths
Proportion of Deaths $\frac{1}{216}$		Proportion of Deaths, more than $\frac{1}{18}$	

* A number of patients took bark and recovered, after the time of my general method of treatment with bark expired, who are not here included, but are classed with those under the other methods of treatment, which added considerably to their success.

END OF PART I.

PART

PART II.

MEDICAL OBSERVATIONS, AND METEOROLOGICAL
REMARKS ON BOARD THE EDGAR OF 74 GUNS
AND 600 MEN, BESIDES SUPERNUMERARIES;
FROM THE 24TH MAY 1779, UNTIL THE 7TH
MAY 1782; DURING WHICH TIME THE SHIP
WAS EMPLOYED ON CHANNEL SERVICE AND
AT GIBRALTAR.

CHAPTER I.

Preliminary Discourse.

ON a very careful review of the observations contained in my first, and in the preceding part of this volume, I was so forcibly struck with the remarkable and important difference between the failure of the antiphlogistic, antimonial debilitating practice; and the beneficial effect of the restorative, or tonic treatment of the remittent, and of ship fever, that no room was left me for hesitating or deliberating which of the two methods ought to be adopted, and most rigidly persevered in.

Being

Being thus fully convinced of the superior efficacy of the tonic method ; with a view to establish, irrefragably, and to promulgate the advantages of this practice over the former—regardless of the expence which I knew must attend, and however so ill I could afford to bear the expence,—I determined to carry the experiment fully into execution, by providing myself liberally with bark from time to time on board of different ships, for that purpose. Besides which Captain Elliot gave me a considerable quantity for the use of the Edgar's men *. The eyes of Government were not yet opened to the political necessity of supplying that valuable, and other useful and very expensive medicines gratuitously †, which the indigence of the establishment of naval surgeons would not permit them to provide at their own expence, in sufficient quantities for the necessary occurrences of the service. The happy event of this determination will appear to the reader to be fully justified, and amply rewarded in the sequel.

In confirmation of this, I might contrast the different effects of these methods, by inserting hundreds of cases in which the bark was successfully administered. But conceiving it will be more conducive to the

* It was only to strengthen the position which I had advanced concerning the indigence of the naval surgeons, that I allowed this liberal-minded officer to press his present on me. But more on this head hereafter.

† Though long before warned of this necessity.

public benefit to relate with minuteness the few cases which failed under this treatment ; and to state the effects of the other different methods in the Comparative Tables ; I have adopted this as, in my opinion, the most eligible, though an uncommon method of shewing the respective merits of both methods.

I have carefully related by what means infection was first brought on board ; and after being almost subdued, was again frequently roused into action on board the Edgar, Romney, and Blenheim, but especially on board the Edgar, notwithstanding the uncommon care and assistance of Captain Elliot, supported by the diligent exertion of able officers under his command, to subdue the infection, and to prevent it from being brought on board. During the American war, I have before remarked, that I was fortunate in sailing with officers who made it their study to assist me every way which I suggested for the prevention of sickness, and for subduing it when it was unfortunately contracted ; both by their personal exertions, and by liberal donations of their wine and stock to the sick.

As this part comprehended a more extensive field for medical observations and attention, than I had formerly been engaged or employed in, it became necessary to enlarge * the plan of the first edition, by

* The same intimation was made in the last edition of my *Observations on Jail, Hospital and Ship Fevers*,

introducing

introducing the monthly review of the Edgar's sick list; which the reader will find to be a considerable improvement; and to which the new arrangement of the tables and cases will be found no invaluable addition.

This part, therefore, comprises a succinct history of the state of health of seldom fewer, but generally of more than six hundred men, for very near three years. The Edgar was chiefly employed with the western squadron.

I always considered myself indebted to many of my assistants* on board the ships I was employed in, for their attention to the sick, and for preparing and administering the medicines as they were prescribed.

* Particularly Messrs. O'Neil, John Wardrobe, John Dickson, and Wm. Ogilvie.

CHAPTER II.

Monthly Review of the Edgar's Sick List, and Meteorological Remarks, from 24th of May 1779, until the End of February 1780.

MAY, 1779.

I was appointed the 24th to His Majesty's ship Edgar, building at Woolwich; and the pendant was hoisted next day. Few of the officers were yet appointed.

JUNE.

The ship was launched the 30th. Rendezvous were opened in different parts of the kingdom to enter men. The number supposed to have entered for the ship exceeded 2000. The officers were all appointed.

JULY.

The ship was haled into dock; and after being sheathed with copper, was haled out again. Sixteen men were received this month from the Conquestadore, guard-ship at the Nore. Four complained; three of whom were sent to sick quarters;
viz.

viz. one with fever ; one with rheumatism ; and one with wound.

AUGUST.

Ninety-seven men were received from the *Conquestadore* ; and forty-six from His Majesty's sloop *Sylph*. Thirty-one patients complained ; viz. five of fever ; one of dysentery ; one of belly-ach ; two of diarrhœa ; six of scurvy ; one of head-ach ; one of sore throat ; one of giddiness ; one of scald ; one of strain ; one of rupture ; six of contusion ; one of fracture ; one of wound ; and two of inflammation. Four of whom were sent to the hospital ; viz. one with flux ; one with rupture ; one with contusion ; and one with fracture. Four of the scorbutic men came from the *Sylph* sloop, and the other two had been lately at sea. Captain Elliot was superseded for some days by Captain John Ferguson.

SEPTEMBER.

We received 162 men from the *Conquestadore* ; 103 from the *Greenwich*, a receiving, or guard-ship in the river ; 4 of the *Sylph*'s men, from the *Dunkirk* guard-ship in the Downs, who had been on shore at Deal sick quarters ; a captain, and a lieutenant of marines, and 25 private men from *Chatham*. This month we sailed down the river, and cruised some days in the North Sea, to look for *Paul Jones*. Afterwards we anchored in the Downs.

29. Complained

complained of fever, who chiefly came from the Conquestadore; one of dysentery; two of belly-ach; one of rheumatism; one of gout; one of head-ach; three of cough; one of hæmoptysis; one of consumption; one of epilepsy; one of nephritis; one of hæmorrhoids; one of eruption; one of scald; two of strain; one of rupture; ten of contusion; two of fracture; and two of inflammation: 62 in all. Sent only one to the hospital with fever.

Our complement of men was 600.

OCTOBER.

Twenty men and 30 supernumeraries came on board, from the Dunkirk; and 70 privates, with a lieutenant of marines from Portsmouth; besides seamen from rendezvous; and those who came on board to enter.

In this manner the ship was manned; which rendered it absolutely impossible to prevent infection from being brought on board, and occasioning immediate sickness, because guardships, or receiving ships are no less magazines of infection than tenders are in time of war.

On the 9th we arrived at Spithead. Several ships of the fleet under the command of Admiral Sir Charles Hardy, Vice-Admiral Darby, and Rear-Admirals Graves, Digby, and Sir John Ross, were sickly; particularly the Canada, Intrepid, Shrewsbury,

bury, London, and Namur; three or four of which were past service for the present—so many of their people were ill. It is said the Canada, during the last and this month sent 380 men to the hospital; and the Intrepid 200, chiefly for fever. The Terrible sent near 200, and the Formidable above 100, for fever. But I am not certain that the numbers I have stated are accurate.

On the 11th I went to the hospital with some patients that my assistants could not get admitted; viz. one convalescent after fever, whose disease I was obliged to mark fever, before they would admit him; two with fractures; and four of the Sylph's men with scurvy. They had so many fever patients in the hospital, that they had no room for other patients—except for marines whom they sent to the Fortune, though they were put on the hospital books. One of the physicians at Haflar told me, “That there
“ were about 2700 on the hospital books, chiefly
“ fever patients: That the infection was extremely
“ virulent: That on board many of the sickly ships,
“ orders had been sent to destroy the bedding and
“ clothes belonging to the sick and convalescents:
“ and, That they were supplied with others at Government's expence*.” The treatment of fever on board of the sickly ships was partly antiphlogistic, and partly antimonial.

* This was a very judicious measure recommended by Dr. Lind.

The 17th, the beer being expended, wine was served to the ship's company. The 22d, at 1 p. m. the Admiral made his signal to weigh, and the fleet came to sail. I had the sick berth appointed on the larboard side under the forecastle. We sailed with 41 patients; of whom 12 had fever, and two had measles.

About the 26th catarrhus symptoms became very general amongst the ship's company. The 28th at noon the fleet anchored at Torbay; and fresh beef was served to all the ships the 29th. Our ship's company was very properly divided into three watches. I purchased some apples and onions for the sick. 30th. A fleet appeared in the offing. The ship was smoked and dried with wood fires. I bought turnips for the sick.

The thermometer hung in the larboard quarter gallery of the ward-room; and its mean height from the 22d to the end was about 60. The moon was full the 24th. From the 22d to the end, the wind varied from NE round to N, continuing but a short time at one point. 24th, 25th, 28th, 29th, rain; and the atmosphere was generally cloudy.

One hundred and forty patients complained; viz. fifty-nine of fever; three of measles; one of belly-ach; one of diarrhoea; one of indigestion; two of scurvy; four of rheumatism; sixteen of head-ach; eleven of cough; one of sore-throat; one of hæmorrhage; one of epilepsy; one of blindness; one of nephritis; one of eruption; three of itch; two

of strain ; fifteen of contusion ; five of wound ; two of inflammation ; two of furuncle ; one of abscess ; and six of ulcer. An increase of 78. Thirty-five remained on cure the 31st. Five only were discharged to the hospital ; viz. one with fever ; one with debility from long illness ; two with fracture ; and one with contusion and old age.

NOVEMBER.

The thermometer was once so low as 42, and never above 63—its mean height 58. The wind veered from SE to WNW and WSW ; then to N and NW. It backed to W, and soon again to NW ; varying until it came to ENE. Then veered to NNW and NW ; from thence to NNE and Nly ; then to the Wrd, NNW and S. The 11th, 13th, 14th, 15th, 17th, 18th, 19th, 22d, 23d. hail. 25th, 27th, 28th, rain, 29th lightning. The atmosphere was chiefly cloudy, and hazy towards the end, seldom clear. The moon changed the 8th ; and was full the 23d.

The number of patients decreased to 128, but the number of fever patients increased. The diseases in all were, sixty-one of fever ; four of measles ; two of belly-ach ; one of diarrhœa ; three of scurvy ; eight of rheumatism ; one of cough ; one of mania ; two of ophthalmia ; one of blindness ; fourteen of itch ; five of scald ; four of strain ; one of rupture ; seven of contusion ; one of fracture ; five of wound ; one of inflammation ; one of furuncle ;
two

two of abscess; and three of ulcer. Besides some slight complaints not inserted.

One died of gout, and one of measles. I sent one with fever; one with consumption; one with rheumatism; one with blindness; one with mania; and one with fracture, 6 in all, to the hospital. I put onions and pease in the scorbutic men's broth, and allowed them their pint of wine with sugar and elixir of vitriol. Tea for breakfast, and two apples to each patient daily. The diet of the fever convalescent patients' was tea, rice, and sugar, fresh meat broth and apples, and some had half a pint, and others more, of wine a day, as I judged proper. Grog was served to the ship's company. The cough was very troublesome to fever patients.

On the 13th some beer came on board for the ship's company; but I had wine allowed for such of the sick as I thought proper. 16th the fleet sailed. Our people continued at three watches. 19th the round-house was inclosed in the sick berth, which made it very commodious. Half wine half grog was served to the people until the 28th, and then beer. We arrived at Spithead the 24th, and Sir Charles Hardy struck his flag the 26th. The fresh beef was husbanded to last the sick until the day before we arrived at Spithead; the Captain gave them mutton the 23d, and the ward-room the 24th day.

As many of the men got drunk with their grog
R 3 which

which was made with three waters ; i. e. with thrice the quantity of water to one of spirit, I proposed to the Captain to mix it with four times the quantity of water to one of spirit, which was done.

The ship was kept clean, well aired, frequently smoked, or dried with wood fires ; and care was taken to keep the sick berth clean, to sprinkle it frequently with vinegar, and air it every day with fires—which it is to be understood in future, whether it is mentioned or not : 45 were in the list at the end of the month.

DECEMBER.

Thirty-six complained of fever ; two of measles ; one of belly-ach ; three of scurvy ; ten of rheumatism ; one of head-ach ; nine of cough ; eleven of fore throat ; one of ophthalmia ; one of old age ; one of eruption ; five of itch ; three of strain ; four of rupture ; nine of contusion ; one of dislocation ; three of fracture ; three of wound ; and four of inflammation : 108 in all.

The 1st and 3d light showers. 2d showers. 24th, 25th, and 26th foggy. The wind was from the W to the SW in the beginning of the month ; but until the 24th I did not pay much attention to the weather ; from that to the 28th the wind was from NE to E, and it then got to the S, where it continued until the end. The mean height of the thermometer was about 48. The atmosphere was,

was, chiefly, hazy or cloudy. The moon changed the 9th, and was full the 24th.

Sent 12 men to the hospital; viz. four convalescent fever patients; three rheumatic patients; one with symptoms of stone; one with cough; and one with ulcer, by furvey. Two marines were invalided. Besides I sent on shore with sick tickets, one for rupture; and one for lameness of his hand. Three other men were invalided; one for old fracture and old age; one for rheumatism and old age; and one for old age. The sick list varied frequently, and there were 28 in it only at the end of the month. A very considerable decrease of 17; but more particularly of fever patients; 36 only having complained, which made a decrease of 25 of that class.

We could get no portable broth at Haslar hospital for the sick. On the 24th we sailed with upwards of 20 sail of the line, with a very numerous convoy of merchant ships, and transports with stores and provisions. The 28th we finished the fresh beef. The cough and sore throat complaints were truly catarrhus, and yielded to moderate evacuations and refrigerants with tinct. cantharid. and gargarisms.

JANUARY, 1780.

On the 3d the ships under convoy parted from us all well. The 8th a. m. a strange fleet appeared, and our signal was made to chase. Upon our

R 4

showing,

showing, by signal, that the ships we were chasing were enemies, a general signal was made to chase. Between 1 and 2 p.m. our ship, the Edgar, brought-to the headmost ship of the enemy's fleet, after having, as we passed them, brought-to large and small 16 or 17 sail. The Bienfaissant brought-to the ship that had charge of the convoy, which took a different course at the commencement of our chasing them. The convoying ship, was a new 64, named by Sir George Rodney, Prince William, in honour to his Royal Highness Prince William, who was in the fleet on board the Prince George 2d rate. One of our frigates brought three or four sail more to, to the windward. About 23 sail of Spanish ships in all were taken, called the Caracca fleet, bound from St. Sebastian to Cadiz, and from thence to South America, freighted with bale goods. There were also several ships that had a great deal of flour on board. Two hundred prisoners were brought on board of us p.m. and next day above 100 of them were sent to different ships of our fleet. The 10th, the America parted company with the fleet, being ordered to convoy some of the prizes to England. One midshipman and ten men were sent from our ship on board the Prince William, now put into commission. Our prisoners lay in the gun-room, and were got on deck in the day-time.

12th. Some of the fever patients complained much
of

of fore throats. My first assistant was seized with fever, and the second was ailing. The apoplectic patient became insane. The 13th, the beer was finished; and on the 14th wine was served to the people.

The 16th, about 1 p. m. a signal was made for a general chase after a strange squadron; and as soon as it was ascertained that they were enemies, the signal was made to engage them as our ships got up. The Edgar then sailing very well, soon got up with and closely engaged the sternmost ship of the enemy, until another of their ships was observed to hale across our forefoot to rake us, which made it necessary to sheer from the ship we were engaged with, to present our broadside to the other. In the mean time the one we had been engaged with blew up, by accident it was thought, and only one man belonging to her was saved, who soon after died of his wounds at Gibraltar*.

Of the enemy seven sail of the line were taken and destroyed.

The 19th, we arrived at Gibraltar, and only found the Panther, with Admiral Duff's flag on board of her, and the Apollo belonging to our fleet; the rest were *black strapt*†. The 20th, ten

* The ship proved to be the St. Dominica, with a flag or broad pendant flying.

† When ships do not get into Gibraltar, but are carried above it with the current, they are said to be *black strapt*.

men were sent to the hospital; viz. six with wound—of which two were amputations; one with erysipelas; the maniac man*; one with blindness; and one with cough. 22d. One Lieutenant and a party of men were sent to assist in clearing the Carracca prizes. 29th. Seventy-one prisoners were sent on board of us. Our signal was made to slip and chase a Spanish ship standing into Algeziras, which we ran on shore. 30th. I was seized myself with fever. A number of the prisoners had the fever. I could not learn whether they had been sickly on board of their own ships or not. All the fleet did not get into the bay before the 25th.

It is remarkable, that only five complained of fever after the 16th, notwithstanding the ship was crowded with prisoners. This confirms the remark I made on board the Juno, “That infection is greatly checked on board of ships by an engagement, or by firing a good deal of powder†.” We had

* This man became insane in consequence of apoplexy.

† Query, Does this salubrious effect, or medicated state of the atmospheric air proceed from the combustion of the powder, composed of nitre, sulphur, and charcoal, generating more oxygen in the atmospheric air simply? or from the ignition and destruction of the superabundance of azot that exists and prevails in the atmospheric air on board of sickly ships antecedent to the combustion? or from the azot being neutralized by the oxygen gas generated during the combustion? or from the combination of these different agents? Does this fact illustrate and

had a Lieutenant of marines and five men killed, and twenty wounded in the action, besides several who were slightly wounded. The fever, which I had, did not lay me up.

The wind varied from S, back to ENE, NE, and N. It returned to the S, and veered round to NW, where it continued several days and blew strong, especially the 16th p. m. It got now to W; returned again to the N, and after returning again to the W, was variable to the end. The atmosphere was chiefly cloudy until the 19th, when we arrived at Gibraltar. The mean height of the thermometer was 61. The 9th, 22d, 23d, 24th, thunder and lightning; 25th, light rain; 12th, 13th, 28th, 29th, 30th, 31st, showers. The moon changed the 6th; and was full the 21st.

The sick list decreased 28. Eighty patients in all having complained only; viz. twenty-eight of fever; one of erysipelas; two of belly-ach; five of rheumatism; one of head-ach; two of cough; one of fore throat; one of ear-ach; two of epilepsy; one of apoplexy; one of nephritis; one of eruption; one of scald; six of contusion; one of excoriation; twenty of wounds; besides several of slight

and confirm Dr. Carmichael Smith's method of correcting infectious aura in prisons, hospitals, or ships? If it does, has the Doctor adopted his idea from the relations of this and similar instances to these of the salubrious effects of the combustion of gunpowder? or from reasoning chemically without the help of these facts?

wounds;

wounds; one of inflammation; two of furuncle; and three of ulcer. 17 remained on cure at the end of the month. Since the 31st of last month, the number of patients decreased 11.

FEBRUARY.

Thirty men complained of fever; one of dysentery; one of worms; three of scrophula; two of cough; one of epilepsy; two of ophthalmia; two of eruption; three of scald; three of strain; one of rupture; fourteen of contusion; two of fracture; one of excoriation; three of wound; two of furuncle; one of abscess; and six of ulcer: in all 78. The general number of patients decreased two; but the number of fever patients increased two; and the number of contused patients is more than double that of last month. The class of contused patients is always increased, I have observed, in a ratio to the irregularity of the people. * Eighteen were sent to the hospital; ten with fever, four of whom were prisoners; two with rheumatism; one with cough; one with eruptions; one with fractured ribs; and three with ulcer.

There were ten in the list at the end of the month—seven less than were on it the 31st ult.

The wind was between the Westward and Northward until the 9th; then became Eastwardly until the 17th; then Westerly; was again Easterly two

* Through mistake, 21 were inserted in the first edition.

days; afterwards between W and N for three days; then E for three days; and after getting to the W a short time, it turned to the E. 1st, 18th, heavy showers; 2d, 17th, showers; 3d, 4th, 9th, 10th, 11th, and 16th light showers. New moon the 5th, and full about the 20th. The mean height of the thermometer was about 60.

I recovered the 1st, thanks to God. The sick prisoners would not take medicines as I wished; I therefore applied to have them sent on shore. 3d. One hundred of our men were sent on board the Prince William. 6th. Eight of the prisoners were sent on shore, by survey, in a cartel. The night of the 9th, a man was seized with fever, and let blood without my knowledge; I therefore gave strict orders that no fever patient should be let blood in future. 10th. I got a berth ordered for the fever prisoners on the starboard side under the fore-castle. 11th. Grog was served to the people. 13th. Sir George Rodney sailed with the fleet and convoy.

Our Captain was appointed Commodore by Sir George, to command the squadron left to assist in protecting and defending the rock; and Captain Gower was appointed to command the Edgar. The squadron consisted of the Edgar, Panther, Porcupine, Enterprize, and Gibraltar armed-ship. 14th. The Commodore's broad pendant was hoisted, and he went on shore to visit the Governor, General Elliot. One of the fever patients vomited a live worm.

worm. Slight symptoms of fever and cold were general. The Governor came on board the 16th or 17th. I was ordered to take care of the prisoners, and to superintend the naval hospital; and my first mate was appointed an assistant to the surgeon of the hospital. Deafness was a general symptom among the fever convalescents.

The prisoners were landed the 23d from our ship; and were confined in a part of the naval hospital. There were a number of prisoners on board of a ship that was haled into the Mole the 25th. One watch had leave to go on shore every day. My first mate was appointed surgeon of the *St. Fermin* which was put into commission; and a private marine, whose name is Parker, on board the *Edgar*, was found qualified to serve as my third mate. Seventeen added to the complement; viz. the Commodore and his retinue.

The Commodore was seized with fever, from fatigue and getting wet on shore; owing to his excessive zeal in overseeing the prizes unloaded of their cargoes; especially of the flour and wheat, of which the garrison were in a very great want. His pulse never exceeded 86. He distinguished the exacerbation himself, by an increase of cough which accompanied the fever. After a moderate emetic, cathartic, and sudorific of James's powder, and the pediluvium, he took the bark freely. But he did not recover his strength, nor was he quite free of cough

cough and affection of his breast, until the second day * after we got to sea ; and then he found himself perfectly well.

I always felt myself affected by the easterly winds at Gibraltar ; and until then my health was never affected by any climate or change of weather, except in the Bay of Mexico in 1776, and on the coast of Africa in 1769. My illness at Jamaica in 1774 was owing to fatigue, &c. See the case.

Dr. Blane, who never had been in the navy before, came from England under Sir George Rodney's protection, and was ordered, he said, to superintend the hospital while the fleet was at Gibraltar.

I recommended the bark treatment of fever, and that the bedding in the hospital should every day be aired in the sun ; which was adopted †, and carefully adhered to ; as soon as the superintendency of the hospital was committed to my care.

* 21st of April.

† About the end of the month.

CHAPTER III.

A List of Fever Patients sent from the Fleet between the 1st January 1780 and 31st March following, to Gibraltar Hospital.

Ships' Names.	No. of Patients sent	Number of Deaths.	Remarks, and Proportion of Deaths.
Sandwich	74	5	The treatment of Fever Patients in the Hospital was the Antiphlogistic, and Antimonial, until I was ordered to superintend the Hospital. The Bark Treatment was now adopted; but owing to the scarcity of Bark it was not administered so liberally as I wished, and consequently it was done under a great disadvantage. The annexed list can do little more than gratify curiosity. But it would be of material service to know in what manner the sick were treated on board their respective ships; of which I could not obtain the knowledge.
Prince George	1		
Royal George	3	1	
Resolution	35	2	
Edgar	10	2	
Minorca	1		
Gibraltar	11	1	
Defence	13	4	
Invincible	10		
Ajax	110	18	
Alcide	2	1	
Alfred	136	9	
Culloden	3		
Montague	2		
Monarch	1		
Cumberland	23	1	
Prince William	11	1	
Terrible	27	2	
Panther	21	5	
Enterprise	36	1	
Porcupine	6	1	
Fortuné	7	1	
Childers	4		
Hyæna	3		
St. Fermin	18	1	
Navy Ordinary	2		
		570	57
		1 in 10	
Spanish Prisoners		437	37
		1 in 13 $\frac{8}{3}$	
		Four of them died in the launch and in landing in Spain.	

CHAPTER IV.

Monthly Review continued until the 31st of August.

MARCH.

THE general number of patients increased 10; and the fever patients increased 16 in number this month. Viz. 46 complained of fever; one of dysentery; one of belly-ach; one of diarrhœa; eight of scurvy; one of rheumatism; one of ear-ach; one of epilepsy; one of eruption; one of scald; two of strain; thirteen of contusion; two of excoriation; ten of wound; one of inflammation; two of furuncle; three of abscess; and three of ulcer: in all 98 patients. Three of whom were sent to the hospital; two for fever; and one for cough after fever.

Pains about the thorax, with cough, have been very general and urgent symptoms among the fever patients. The liberty men are very irregular. The Levanters prevailed greatly this month; and affected fever convalescents. The wounded men at the hospitals, and all the weakly people were also exceedingly affected by the Levanters. I felt their effects very much myself.

The appearance of the wounds at the hospital altered very much for the worse, and required dressing twice a day.

The Surgeon informed me that his bark was nearly expended. I represented this to the Commodore, and on his application to the Governor, the Surgeon-general to the army was ordered "to spare a quantity for the hospital, and to take a receipt from me for it;" which was done.

On the 12th, we received on board 391 British subjects from Spain in exchange for the sick and wounded Spanish prisoners who were sent from the fleet to Spain on our arrival. They were in a dreadful condition when they came on board from their confinement in the Spanish prisons; from a fatiguing journey; and from the want of clothes and linen to shift them. Besides their probably being infected with fever.

They were immediately distributed among the squadron. Those who were kept on board of the *Edgar* were well cleaned; and their old clothes were thrown overboard, and they were supplied with new flops. There were several surgeons' mates among them.

14th. I ordered the common dose of bark on board to be reduced from ʒi. to ʒfs. and not to be increased but in such cases as I should particularly direct it. One of the surgeon's assistants at the hospital was seized with fever. 20th. Soft bread was served to the squadron; much sand in it. 21st. We haled out of the Mole. The progress of the infection can be easily traced from the sick to the well,

well, either by contagion or contiguity. 29th. Some more men came on board from Spain last night, and were managed as those that came on board the 12th. I gave my scorbutic men the citric acid, as prepared by Andrews.

Excepting part of the 17th, 25th, 26th, 30th, and 31st, when the wind was W. and NW. it was E. blowing at times in strong flurries. 5th, 14th, 15th, 23d, 24th, 27th, and 28th showers. The atmosphere was cloudy, or hazy, seventeen days, and clear fourteen, though not successively. The moon was new the 6th; and full the 20th. The mean height of the thermometer was 64. Only ten complained of fever before the men came on board from Spain, so that the number of fever patients was greatly increased by the cartel men coming on board. 38 in the list at the end of the month.

APRIL.

Forty-nine complained of fever; six of dysentery; eight of scurvy; five of rheumatism; one of cough; one of ophthalmia; four of eruption; two of strain; four of contusion; one of fracture; one of wound; one of inflammation; one of abscess; and four of ulcers: 88 in all. Which was a decrease of ten patients on the whole; though the fever patients increased three in number. Two were sent to the hospital: one for fever; and one for weakness, who

came from it the day before. On the 30th there were 25 in the list.

The wind was from W. to NW. until the 16th. On the 17th, and 18th E. though variable; and continued between E. and NNE. until the 24th, when it became more variable; but was mostly Northerly until the end. 26th and 27th we had calms. The atmosphere was generally hazy or cloudy; for it was clear seven days only. 26th shower; and 27th showers. Mean height of the thermometer 65. The moon was new the 14th; and full about the 19th.

The 5th. A boat came in from Barbary, and brought some fowls and some fruit. I got some lemons for my scorbutic patients. Three of four scorbutic men, who had taken Andrews's citric acid were better. Wine was served to the people. The 6th. Part of the prisoners were sent over to Spain; and all of them who were in a condition as to health to be moved, were sent over the 8th. Several went who were unfit to be moved, so anxious were they to get home. Two of them died in the boats; and two died after they were landed in Spain. Eleven of them were left in the hospital very ill. 10th. In overhaling some prize medicines on shore, I found 24lb. of bark, which I gave to the Surgeon of the hospital, by the Commodore's permission. I afterwards came on board extremely fatigued, and very unwell.

12th. I

12th. I was informed that the 73d regiment was very sickly, with fever and dysentery. The Surgeon, Mr. Cairncroft, appears to be a very judicious man.

*About noon I was seized with a most dreadful paroxysm of fever for five hours, during which I took a large dose of cort. and sal. succin. twice.

13th. The Hyæna arrived from England last night. I felt great debility, and my head much confused.

18th. Ten of the eleven prisoners left in the hospital are dead. 19th. We ended the serving of soft bread. My mate came off from the hospital.

We sailed the 20th a.m. with the Hyæna, and next day at noon we parted company from her.

22. I was quite recovered. We spoke the Romney. The sick had mutton broth for dinner. One of my scorbutic patients was very little better after having taken six ounces of lemon juice daily for a number of days.

24th. I got a sheep from our mess for the sick, of which I dressed a quarter a day for them. My lemon acid was gone, I began upon my orange acid. We fortunately got a few lemons out of a ship. On our sailing from Gibraltar, I ordered the common dose of bark to be increased to ʒi.

* See case 24, of this volume.

MAY.

Thirty five complained of fever; one of dysentery; one of belly-ach; sixteen of scurvy; four of rheumatism; one of ophthalmia; one of nephritis; one of eruption; one of itch; one of scald; two of strain; eight of contusion; two of wound; and two of ulcer: 76 patients in all. The number of patients decreased 12; and the fever patients decreased 14. This was a very material alteration; notwithstanding which three died of fever. This is more than happened any month before, while I belonged to the *Edgar*. One of the patients was taken ill the 17th, and died the 22d; one was affected the 27th, but did not complain until the 28th, and died the 31st; the other man complained the 26th ult. and died the 6th. Two were sent to the hospital, the one a fever convalescent; the other complained the 24th of hæmorrhagia: 32 at the end of the month on the list.

The wind was between NE. and NW. the first week, and afterwards mostly between W. and SW. until the 13th, when the ship arrived at Spithead; 16 scorbutic men on the list. Had we continued a few weeks longer at sea, many of the men would probably have fallen down in the scurvy. The 9th, 10th, and 11th light showers; 31st, showers, thunder and lightning. The atmosphere was generally cloudy, seldom clear, or hazy, and very little fog.
The

The mean height of the thermometer was 62 until the 13th ; 1st, and 2d, some lemons were bought for the sick, out of a Swede, which the Commodore would not let me pay for ; and he ordered me what fowls or wine I wanted for them : 3d, the men fired at a mark, and were served double allowance of wine. The 13th at 8 a. m. we anchored at Spithead.

The 9th, blowed very strong, and rained.

On the 18th, Sir Charles Hardy died, and his corpse was carried from the Fountain in Portsmouth, in great state, without Landport Gate, and put in a hearse which was waiting for it. During the procession, eight flag ships were firing half minute guns, and his own flag was struck half mast.

The moon was new the 4th ; and full about the 19th.

JUNE.

The number of the fever patients increased 5 ; though the list of the whole decreased 20—forty complained of fever ; three of scurvy ; two of rheumatism ; two of cough ; one of fore throat ; one of strain ; three of contusion ; one of wound ; one of abscess ; and two of ulcer—56 in all ; a less number than we have had any month since August. Two died of fever ; the one on the 16th who complained on the 29th ult. and had a violent hæmorrhage the 3d ; the other on the 27th, who complained the 8th, and despaired from his being first taken ill. 4 were sent to the hospital ; viz. one with fever ; two

with scorbutic symptoms; and one with ulcer. 25 were in the list at the end of the month.

1st, thunder and lightning; 2d, thunder; 4th, 10th, 17th and 18th light showers; 5th showers. The wind was E. until the 8th, when it got to SW.; and continued chiefly between that and the NW. until the 22d, except on the 11th, when it was calm; so it was 23d, 24th, 25th, and 26th. The 27th and 28th from NE. to E.; and the 29th and 30th from W. to SW. The atmosphere was generally cloudy. The mean height of the thermometer was 65. The moon changed the 3d; and was full about the 18th.

The Commodore commanded the ship again as a private Captain. The ship's company was at three watches still.

The 4th, 5th, and 6th, were very cold for the season. The ship sailed the 8th, under the command of Admiral Geary, in company with 29 sail of the line, and anchored p.m. in Sand-Down bay.

9th, a. m. we sailed with the fleet.

The 11th. Cough was the most general and harassing symptom amongst the fever patients. Portable broth was made for the sick, with vegetables in it, which I bought.

The 16th. Three sail of the line joined us.

The 17th. I observe that the infection is by no means subdued. A Lieutenant of marines; one of
my

my mates; and the gunner had the fever. I ordered flummery, for supper, for the sick.

20th. Some directions respecting the sick were sent on board the different ships by the Admiral, to be submitted to the consideration of the Captains and Surgeons. They contained one useful proposal, to exchange their salt meat with the purser, for wine, which the Surgeon should give to them as he might see proper; but from my own experience I am persuaded the difficulty and trouble attending such a scheme would render it impracticable. I observe, that issuing wine to my own patients, occasions more trouble than most people will undertake, and it would create still more to adopt the proposal. It would be necessary to keep one book with the Purser, and another with the people; to serve it in small quantities to the sick very often, and to see it given them, would unavoidably employ a great deal of time; give great trouble; and oblige the Surgeon and his mates to be almost constantly amongst the sick, when they are numerous. This probably was the cause of my mates being often ill, and of my being generally ailing with fever, though I never was laid up by it on board the Edgar.

In 1779, before the Edgar went to sea, I wrote to a certain Lord on the subject of supplying each ship, according to her rate, with a proportion of wine for the sick, at the expence of Government. The good effects of the plan would have been experienced

rienced on service. It would have been administered with less trouble by the Purser according to the Surgeon's lists, than I had, and the expence would never have been perceived by the country.

23d. One of my mates was seized with fever.

27th. The ship's beer was out, and grog was served to the people, with four waters, as I had recommended before.

JULY.

The list increased considerably, particularly in the number of fever patients, which was 56; twelve complained of scurvy; one of rheumatism; one of giddiness; one of nephritis; three of strain; six of contusion; one of fracture; one of wound; and one of inflammation; and one accident happened. On the 31st, thirty-seven patients were ill. In the month 84 complained; which made an increase of 5 patients.

The wind varied from NW. by N. to E. except on the 3d, when it came WSW. until the 27th, and then varied between the W. and SW. But it continued longest at NE. The thermometer was never under 64, nor above 74. The atmosphere was generally cloudy or hazy, seldom clear. The moon changed the 2d; was full about the 16th at night; and was new the 31st. 1st, 3d, 5th, 26th, and 27th, light showers. The weather was remarkably cold for the season.

3d. We

3d. We fell in with a French convoy, and took thirteen sail of them.

5th. A man dropt overboard out of the head, and was drowned.

6th. We have now more bad fever cases than we have had, at any time, for many months; and numbers of convalescents have relapsed oftener than once from irregularity. A number of the well men get drunk with their grog. The ship is regularly smoked and dried with fires as usual. In consequence of the prevailing sickness, I wrote the following letter yesterday to the captain, on the subject.

“ SIR,

“ The infection, which has existed on board his Majesty’s ship under your command, ever since she was first manned, having of late become so virulent as to resist the methods that succeeded formerly in checking it, I beg leave to acquaint you, that it will be highly necessary to have recourse to other means for that purpose; and to inform you, that the most effectual method which I have ever experienced for that purpose, is to smoke the ship frequently with tobacco. The tobacco ought to be well wet with vinegar, and laid on fires placed in tubs, having water and shot under them, and there ought to be no more fire than is sufficient to light the tobacco, that it may smother away to ashes.

It

It will be necessary to light seven fires, and that each fire should contain at least two pounds of tobacco, for one smoking. When the fires are lighted, all the ports should be barred in, all the hatchways should be covered with tarpawlings, and the smoke should be thus confined for three hours at least, with all the men's clothes and bedding below, which should afterwards be well aired on the booms or in the shrouds.

"I am, Sir,

Edgar at Sea,
Aug. 17, 1780.

"Your most obedient

"humble servant,

"R. ROBERTSON."

Captain Elliot, Commander of
His Majesty's ship Edgar.

To which Captain ELLIOT returned the following
Answer.

"SIR,

"I Have received your letter of this date, and have given directions to the purser of his Majesty's ship under my command, to supply such quantities of tobacco as you may from time to time think it necessary to demand, for the purpose of smoking the said ship, to check the progress of the infection therein, agreeable to your recommendation.

"I am, Sir,

"Your most humble servant,

"JOHN ELLIOT."

Mr. Robertson, Surgeon, Edgar.

6th.

6th. Half a chest of lemons was got out of a Swede, of which I bought half for the sick. One of the gentlemen was seized with fever. He lay below while the ship was smoked with tobacco.

8th. One died of fever, who was added the 3d. I prognosticated his death the moment he first complained. One of my mates was added with fever. Wine was served to the ship's company. The discharge from blisters is a yellowish gluten.

10th. The master at arms was seized with fever from going down into the fore cockpit, while the ship was smoking with tobacco.

12th. It is observed that the waiters, after-guard and marines, are those chiefly affected with fever. Two sail of the line joined us.

One division of the well men aired their bedding every day by turns. In consequence of my application to Captain Elliot, on this subject, a long time ago, he made this a standing order on board, and the men were always glad to air when it came to their turn. The sick's bedding was aired every day, and the utmost care was taken to keep the ship clean, dry, and well ventilated.

Captain Elliot, and the first lieutenant Mr. Forbes, an old deserving officer in the service, who punctually executed the Captain's orders respecting the men's health, used the utmost exertion to get the ship healthy, and to keep her so. Every thing which I proposed for that purpose was readily put in practice.

tice. Mr. Forbes is now a commander in the service.

AUGUST.

The number of diseases diminished; but the number of scorbutic patients increased greatly; and the general increase was 65 patients: 150 in all complained. Viz. 34 of fever—a decrease of 22 fever patients—; one of belly-ach; one of costiveness; eighty-nine of scurvy; one of epilepsy; one of scald; eleven of contusion; one of strain; one of excoriation; three of wounds; two of inflammation; one of abscess; and four of ulcers. One fever patient died of relapse the 13th, owing to misconduct. One was sent to the hospital for fever; and twenty-six for scurvy, with other complaints, to Haflar, and the sick tent on the beach near the hospital which was erected for the reception of scorbutic men.

2d. The Inflexible and Buffalo joined us; the captain of the former died on his passage out. The fleet spoke with the Ramilies, and a large outward-bound convoy.

3d. My citric acid was finished. It has been very useful, but it is too expensive for a surgeon to purchase at his own expence. My mate recovered.

4th. One of the lieutenants complained of fever. The fever convalescents became scorbutic.

11th.

11th. Three French ships were taken—wine was served to the men.

12th. The Captain gives up all the milk of his cow for the use of the sick, which I see divided among the worst patients, with boiled rice and sugar. I give the worst scorbutic cases lemon juice and sugar with their wine; and I mix the wine of other patients with a sort of beverage well fermented like mawbey, and serve it several times a day.

13th. We had a box of lemons sent on board for the sick. One of the prizes had lemons on board, which were taken out and distributed among the ships of the fleet. The Valiant joined the fleet.

16th. The captain has been pleased to consult me several times about the best method for managing the scorbutic men of the fleet when we get into port; and says, that he will call upon me for my opinion in writing, before we come to an anchor.

17th. I delivered my report of the effects of smoking with tobacco in the following words:

“ SIR,

“ ON the 6th July last, when I represented to you, ‘ that the infection was become so virulent, as to render it necessary to have recourse to other means than had formerly been used successfully to check it,’ the number of fever patients on the sick
list

list was fifteen; and that for some days before 'it had been increasing by two or more daily.' I have now the pleasure to acquaint you, after having smoked the ship five times with tobacco, in the manner I proposed, only mixing sulphur with the vinegar made use of on the occasion, to prevent the tobacco from being embezzled, which it fully answered; that the number of fever patients is reduced to four; and that four men only have complained of fever for the last twelve days.

"Should you think proper to represent the case to the Lords Commissioners of the Admiralty, I am of opinion it might be productive of future benefit to the service.

"I am, Sir,

Edgar, at Sea,
Aug. 17, 1780.

"Your most obedient,

"Humble servant,

"R. ROBERTSON."

Captain Elliot, Commander of
his Majesty's ship Edgar.

17th. Twenty men were pressed out of a Weymouth privateer by our ship, and brought on board.

18th. I gave my opinion of the method which I judged best for recovering the scorbutic men of the fleet, to the Captain, in writing, as follows:

"SIR,

“ SIR,

“ IN obedience to your desire that I would communicate to you, what in my opinion is the most expedient method to recover the scorbutic patients of the fleet, I am to acquaint you that it will be proper to lodge them on shore in good tents ; to supply them daily with new baked soft bread, with a portion of milk if possible ; with vegetables in their broth every day ; but in particular with half * an allowance of wine if they are served beer ; otherwise with a whole allowance, mixed with a proportion of lemon juice, and of brown sugar or molasses, of which I would administer so much at a time to each as may be thought proper.

“ I am, Sir,

“ Your most obedient,

Edgar, Aug. 18, 1780.

“ Humble Servant,

“ R. ROBERTSON.”

Captain Elliot, Commander of
His Majesty's ship Edgar.

As soon as the fleet came to an anchor at Spithead, the Captain went on board the Admiral and

* This quantity for the weakest patients, with the lemon juice, would not be too much ; and for other patients three, or even four times the quantity would not be too much for most of them.

Some stomachs will bear more and some less of the lemon juice ; of which the quantity is to be regulated accordingly.

delivered my letter ; a council was held by the Admirals and senior officers on the business, and the *spirit of this plan* was adopted and put into execution. Tents were immediately erected on shore for the scorbutic patients who were sent and dieted nearly as I proposed ; the Admiral's surgeon superintending them. But they were sent with sick tickets, and entered on the hospital books, as if they had been received into the hospital.

Our ship's company had an extraordinary quantity of vegetables in their fresh broth, which was made every day for them while we remained in port.

31st. There were 13 in the list.

Until the 14th, the winds were chiefly northerly and eastward, and then SW. until we got to Spit-head on the 18th. The weather was moderate, though cold for the season—8th, 9th, 12th, and 13th were calms. The atmosphere was generally hazy. The moon was full 14th p. m. The thermometer was not below 64, nor above 72.

The ship's company were paid prize money the 28th.

I was favoured with the following statement of the number of sick on board the different ships of the squadron last cruise ; but I do not think it so complete as to be of great public utility. A number of the ships lost men by the scurvy, though fortunately we lost none on board the Edgar ; and I thank
God,

God, I have never lost a patient by scurvy. For, though citric acid is the most effectual remedy for scurvy that we know, there are so many resources to check it, that I have so far at least always succeeded in checking it.

CHAPTER V.

Contains a List of the Ships which were most sickly when we arrived at Spithead, with the Number of the Sick on their respective Weekly Accounts, sent to the Admiral. By which it appears that the prevailing Disease in the Squadron was Scurvy.

Ships' Names.	Number of Sick.	Remarks.
Barfleur	95	
Britannia	187	
Royal George	52	
Edgar	90	—Every man with the slightest complaint was included in the Edgar's Sick List.
Bellona	161	
Alexander	136	
Namur	75	
Queen	210	
Formidable	126	
Princess Amelia	158	
Union	83	—These are the numbers stated in the weekly account, the week before we arrived ; and as the number increased greatly the last week on board of the other ships, it is reasonable to suppose they were proportionably increased on board of the four last named ships.
Duke	94	
Ocean	100	
Dublin	80	

There were some very sickly ships which either went to Plymouth, or whose weekly accounts were not sent to the Admiral, when my list was made out. Partial statements can only gratify curiosity. As I observed before of the list of men sent to Gibraltar hospital ; they afford no ground for practical improvement. On the contrary, from them false conclusions are drawn to the prejudice of the science, and the deception of the public. To answer any good purpose, it is necessary that a faithful and complete register, during the whole time the ship is employed, should be furnished.

CHAP-

CHAPTER VI.

*The Monthly Review continued until the 7th of
May 1782.*

SEPTEMBER.

OUR sick list decreased 77. Fifteen complained of fever; fifteen of dysentery; one of costiveness; two of retching; five of scurvy; two of rheumatism; one of gout; one of head-ach; five of cough; two of sore throat; four of epilepsy; one of eruption; one of itch; eight of contusion; three of strain; one of rupture; one of excoriation; one of wound; and three of ulcer; 73 patients in all, besides one accident. - One died of fever, whose death I predicted when he first complained; and one was drowned in getting a top-mast up. Thirty-two were sent to the tent and hospital, of whom, seven were sent unknown to me, and one of them was an invalid; two were sent to a guardship for harbour duty, and four were invalided. There were fifteen in the list at the end of the month.

First day six were surveyed, and four of them invalided; one for gravel; one for symptoms of consumption; and two for old age. The other two were sent on board of a convalescent ship; whose diseases were denominated fits and rheumatism.

2d. We sent eleven convalescent scorbutic patients to the tent. Seven were sent to Haslar without my knowledge the 6th to be surveyed, of whom only four were in the list. Their diseases were, one of fever; one of rheumatism; one of diarrhœa; two of contusion; one of ulcer; and one of rupture*. 9th, Our men were brought on board from the tent. Two marines who were in the list were sent to quarters to be exchanged.

11th. Seven were sent to the hospital; three with scurvy; one with epilepsy; one with rupture; one with ulcer; and one with L. V.---Some of them came on board the 9th from the sick tent. 12th. Captain Gower appointed to command our ship. We sailed under the command of Vice-Admiral Darby, and anchored 13th at Torbay, where our people continued to enjoy fresh meat broth with vegetables daily. 16th. The *Namur's* and *Ocean's* men, who came on board of us from the sick tent at Spithead, went on board of their proper ships.

* These seven, and the six sent the 1st, should be deducted from 32, the total number of hospital cases.

17th. A marine who was very ill of fever, complained. 19th. Wine was served to the ship's company, the beer being out. 20th. The marine added the 17th died in the night of his fever.

The fleet sailed p. m. 21st. ; and anchored at six p. m. Our ship, with the Cumberland, Alexander, Invincible, and Porcupine, sailed about 11 p. m.

23d. A man fell overboard and was drowned. Some of the fever cases were exceedingly bad, and greatly afflicted with delirium. Dysentery was more prevalent than in any month I belonged to the ship.

Could this proceed from any other cause than the general debilitated state of the ship's company by scurvy last month? A gentle emetic of ipecacuan, and a dose of rhubarb, were all the evacuants which were used.

The cure was effected by opium, bark, and a few grains of rhubarb and ipecacuan occasionally to keep the bowels open; and in slight cases by rhubarb and ipecacuan with opium.

Hence it would seem that, instead of dysentery being *always* inflammatory, and requiring the antiphlogistic treatment; it is often a consequence of debility, and ought to be treated very differently: as appears very obvious from our dysenteric patients recovering under a contrary treatment.

The thermometer was not under 60 nor above 68 until the 29th, when it was 58. The moon was full 13th, and new 29th. The atmosphere was ge-

nerally cloudy. The wind was very variable from the 12th to the 19th, but chiefly Southerly. 20th, and 21st, N.; 23d, S.; from the 24th to the 29th. W. and then NW. From the 21st it blowed strong all the month. 19th, 23d, 24th, 27th, 29th, thunder and lightning. 15th, 20th, 26th, 28th, 30th, showers; 17th, hard showers.

OCTOBER.

The number of patients decreased to 54. But 20 complained of fever; one of dysentery; one of costiveness; one of diarrhœa; two of scurvy; four of rheumatism; one of head-ach; one of cough; one of ear ach; one of ophthalmia; one of blindness; one of diabetes; one of impetigo; one of scald; nine of contusion; one of strain; one of fracture; one of wound; two of inflammation; one of furuncle; and two of ulcer. We sent 7 the 21st; and 4 the 25th to the hospital;—11 patients in all; viz. one with fever; two with cough; three with rheumatism; two with epilepsy; one with diabetes; and two with ulcer. On the 31st there were 22 in the list, an increase of 7.

Until the 8th the wind was W. when it got to the Ed for a little; and returning suddenly to the Wd. it continued so till the 14th; then it was variable. But soon fixed at SW. to the 11th, when it became variable, but again got to the W. and so continued till the 26th, and afterwards between the
N. and

N. and E. to the end of the month. The atmosphere was chiefly hazy or cloudy. 3d, 7h, 10th, 12th, 13th, 14th, 16th, 17th, 18th, 19th, 20th, 21st, light rain; 6th, 8th, showers. The moon was full the 13th; and new the 27th. The thermometer was between 52 and 64.

18th. We anchored in Plymouth Sound: the weather during the cruise was exceedingly bad, blowing constantly. 1st, 6th, 8th, 10th, and 16th, it blew very hard. Only the Cumberland and our own ship, of the little squadron kept the sea. The rest were disabled, and went into port before the cruise was out. Several of the fleet lying in Torbay sustained damage from the gales. 20th. We began to serve beer to the people.

26th. We sailed with the Cumberland, and next day joined the fleet, consisting of 32 sail of the line, under the command of Vice-Admiral Darby.

Molasses began to be served to the ship's company instead of a part of their oatmeal.

NOVEMBER.

The number of fever patients increased to 23; besides whom two of dysentery; one of belly-ach; one of scurvy; two of rheumatism; two of cough; one of sore throat; one of deafness; one of nephritis; three of eruption; ten of contusion; one of strain; one of excoriation; and one of inflammation; 50 in all complained. So that the number of patients

patients decreased four. But at the end of the month there were only 19 in the list, making a decrease of 31. I therefore considered the state of the ship's company, after cruising so long at this season, as remarkably healthy.

The wind was between the Ed. and Nd. until the 16th, except the 13th NW. 17th SW. and then until the 22d between W. NW. and N. until the 26th; it was then variable two days; and again became easterly to the end. 1st, 2d, 21st, and 22d, it blowed strong; and it blew a heavy gale the 20th. The 23d, it was calm. 1st, 2d, 3d, 4th, 5th, 7th, 8th, 15th, 16th, 17th, 18th, 19th, and 20th, light rain; 21st, and 22d, showers. The atmosphere was generally cloudy; seldom foggy, and sometimes hazy. The thermometer was not below 50, nor above 62, though there was a fire sometimes in the ward-room. The moon was full on the 12th; and changed the 26th.

8th. The beer being expended, wine was served to the ship's company.

20th. We lost company of the fleet.

21st. A fever patient fell out of his hammacoe, and lay in the wet lee scuppers last night, some time, before the negligent sentinels observed him.

28th. Yesterday the captain and ward-room mess bought half a chest of lemons on board of a ship. To-day we joined the fleet. I hear the Britannia's people are becoming scorbutic.

30th. The Jupiter made the signal for seeing a
strange

strange fleet. All the sick, except the man who fell out of his hammacoe and was dying, were moved down into the cable tiers.

DECEMBER.

The number of sick increased one. But the number of fever patients decreased thirteen—ten, only, having complained of fever; one of belly-ach; one of pain of the stomach; five of scurvy; four of rheumatism; five of head-ach; three of cough; five of sore throat; one of hæmorrhage; two of deafness; one of ear-ach; one of itch; three of contusion; two of strain; one of wound; three of inflammation; one of abscess; one of ulcer; and one accident—51 in all. And only 20 in the list at the end of the month, after having been near fifteen weeks at sea. This is generally if not always the case*; unless the scurvy makes its appearance; which to a certainty is cured by citric acid.

The wind from the 1st to the 10th was between the Ed. and Sd. and fresh gales. The 11th, 12th, 13th, variable with calms. The 14th, and 15th, from S. to SW. little wind and variable with calms. The 16th, variable and little wind. From the 17th to the 22d, E. fresh gales; then until the 22d from N. to NE.; 27th, SW. and W. until the end of the month. The atmosphere was sometimes hazy; but generally cloudy. 30th, and 31st, rather foggy. 2d, 3d,

* As to the people's health. For they are more regular and temperate while at sea than they are in harbour.

17th, 18th, 30th, and 31st, light rain. The 19th, 23th, 21st, 22d, 28d, and 24th frost. The moon was full the 10th, and changed the 25th. The thermometer was between 44 and 64.

The 1st the Fortitude joined our fleet, and made the signal for seeing a strange fleet. The fever patient who fell out of his hammacoe the 21st ult. died.

5th. A signal was made for a fleet in sight.

On the 9th, the Bellona joined the fleet. On the 14th, I had a bad cold ; a privateer was taken. On the 15th we were off the Land's End. The 17th, the Admiral haled down his flag, and made the signal for each ship of the fleet to make the best of her way to Spithead.

On the 21st we anchored at St. Helens ; and on the 22d at Spithead, after a long winter's campaign. Snow on the ground. We heard that orders were issued to take Dutch ships.

On the 24th, die Sabbati, we sailed in company with the Formidable, Active, and Maidstone 25th. the Warwick joined company with us. 26th p. m. the Squadron agreed to share equally in prize money from the day of our sailing, until we all arrived in some English port. The agreement was confirmed by a gun being fired from each ship.

On the 28th a violent accident happened. 21st. we pressed nine men out of a privateer.

JANUARY,

JANUARY, 1781.

The wind between the 1st and 4th varied between WNW. and NNE. ; then was SW. until the 7th. From the 8th to the 17th, between NW. and NE. ; and from the 17th until the 22d between SW. and NW. ; 22d it was E. and afterwards N. The 5th, 6th, and 7th the atmosphere was hazy. The 8th was clear, and the rest cloudy. The 1st, 2d, 17th, 18th, 20th, and 21st light rain ; 22d showers. From the 8th to the 18th frost. The moon was full the 8th ; and changed the 24th. The thermometer was not under 44, nor above 58, that I observed.

The number of patients increased to 66, and the number of fever patients were more than doubled, viz. 21 complained of fever ; two of belly-ach ; one of diarrhœa ; two of scurvy ; one of rheumatism ; one of head-ach ; six of cough ; five of fore throat ; one of ear-ach ; one of epilepsy ; one of nephritis ; one of diabetes ; one of eruption ; eleven of contusion ; five of strain ; one of excoriation ; two of inflammation ; and three of ulcer. The man died of the accident of the 28th ult. and seven were sent to the hospital, viz. one with scurvy ; three of cough ; two with rheumatism ; and one with diabetes—27 on the list at the end of the month.

2. Wine was begun to be served to the people.

The

The 3d, one of the privateer's men complained of fever.

The 5th, the Warwick took in sight a large Dutch ship, which we afterwards found was the Rotterdam of 50 guns.

The 6th, a hundred of the prisoners with some of the officers sent on board of us; and we sent three midshipmen and twenty men on board of the prize. Our people were served grog.

The 7th, we arrived at St. Helens with the Warwick and prize; and on the 8th we anchored at Spithead. The 14th, we sailed, and anchored the 15th a. m. in Plymouth Sound. On the 15th, six complained of fever, from irregularity. 17th. Five men whom we sent to the hospital here on the 21st of October, are returned as bad as when they went *. 22d. The Captain has the gout. 24th. The men who came from the hospital on the 17th, were sent back to the hospital again the 26th, per order.

FEBRUARY.

The sick list decreased only three, but the number of fever patients was 13; one of erysipelas; two of dysentery; one of scurvy; two of rheumatism; thirteen of cough; two of sore throat; one of suppression of urine; one of eruption; two of

* I was absent from the 11th to the 19th.

scald;

scald; ten of contusion; one of strain; one of dislocation; three of wound; three of inflammation; one of abscess; and six of ulcer—63 in all. Five were sent to the hospital, viz. one with fever; one with scurvy; two with cough; and one with ulcer. One of the lieutenants of marines was one of the patients sent for cough—33 patients on the list at the end of the month.

The ship returned to Spithead.

MARCH.

The number of sick increased greatly; and the fever patients were more than triple of last month's, 41 having complained; one of peripneumony; two of belly-ach; one of pain of the stomach; three of rheumatism; one of head-ach; seventeen of cough; eight of fore throat; one of consumption; two of eruption; two of scald; seven of contusion; three of strain; one of rupture; two of fracture; two of wound; six of inflammation; four of abscess; and nine of ulcer---113 in all.

Two died; one of peripneumonia, or pleuritis; and the consumptive patient. Eight men were sent to the hospital, viz. two for fever; one for rheumatism; one for fracture; one for contusion; and three for ulcer: besides three who were surveyed; one of them for old scorbutic symptoms, was invalided; and the other two with scorbutic symptoms were

were ordered for harbour duty. At the end of the month there were 30 men in the sick list.

13th. We sailed with 27 ships of the line under the command of Vice-Admiral Darby, and Rear-Admirals Digby and Sir John Ross, Captain Gower still commanding our ship. The 14th, one complained of fever who came on board with nine others, from a tender, and brought fresh infection along with them. It deserves notice, that six only complained in the preceding thirteen days; and that excepting the 30th not another day escaped without one, or more patients complaining of fever.

The danger of taking men out of a tender without having them thoroughly cleaned and newly flopt, is very great; and therefore merits universal attention on board of a ship. Because there is no saying whose life may not be involved in the consequence. Molasses was served for half the oatmeal, On the 20th, the fleet made Cape Clear, and we cruised off and on. On the 21st, wine; and on the 26th grog was served to the people. Crout was served occasionally. The 27th, the victualling convoy appeared, and joined us, from Cork. An uncommon phenomenon appeared last night in the sky. A boy swallowed a shilling without any bad consequence ensuing from it.

On the 30th, six French prisoners were sent on board

board, who belonged to a privateer which the Cumberland took.

The wind from the 13th to the 18th, between NE. and E. On the 18th and 19th, it was variable. From that time until the 22d, WSW. It again became variable the 22d; then E. until the 25th; when it was from S. to WNW.; then from NE. to ESE. until the end, but variable. The 28th and 29th it blowed strong. At other times the weather was moderate: 28th, snow; 29th, hail; 30th, light rain. The atmosphere was seldom clear; but chiefly cloudy, or hazy. The moon was new the 14th, and changed the 24th. The thermometer was not below 46, nor above 65.

APRIL.

The number of sick decreased to 68; and the fever patients to near one-third of last month's; fourteen only having complained. One of belly-ach; one of scurvy; three of rheumatism; three of head-ach; one of cough; four of fore throat; seven of ear-ach; one of eruption; four of scald; eight of contusion; one of strain; one of dislocation; four of wound; four of inflammation; one of abscess; and ten of ulcer. 23 patients in the list at the end of the month.

On the 9th wine was served to the people. The 11th a man who had lately lain on board the Crescent complained of fever.

On the 12th, a. m. we arrived at Gibraltar, together with the St. Alban's, Courageux, Medway, and the convoy. The Flora went up to Minorca with the convoy, and the rest of our fleet cruised in the bay and gut. As soon as we anchored, the enemy began to fire on the town and ships. On the 14th, the Alexander came in and anchored; with Sir John Ross on board to superintend the landing of the provisions and stores. Our ship weighed anchor p. m. and stood off and on in the bay, which we did most nights until the 20th, when we sailed again with the fleet.

The 16th, grog was served to the people. The gun boats annoyed us daily, and wounded some men on board the frigates. The surgeon of the 58th was wounded in both legs by pieces of a shell. One of his legs was fractured; and the other was amputated.

On the 20th, seven passengers, women and children, came on board of us, and numbers went on board of other ships. The inhabitants being beat out of the town by the enemy's shot and shells, were obliged to encamp on the hills over the South barracks. We sailed with the fleet.

The wind was from NE. to NW. From thence it came to SW.; back to the N.; afterwards it was variable. It then got to the W., and between that and N.; then it got to the E.; it again came W. and NW.; returned back to the E., and was between
NE.

NE. and SE. until the end. The atmosphere varied between cloudy and hazy; was seldom clear until near the end of the month. 2d, 7th and 12th light rain; 17th showers. The moon was full the 8th, and changed 23d. The thermometer was never below 54, nor above 68. Nothing particular occurred.

MAY.

Thirty-eight patients only complained this month; viz. eight of fever; one of belly-ach; one of pain of the stomach; one of scurvy; five of rheumatism; one of head-ach; two of hæmoptoe; one of consumption; one of deafness; one of ear-ach; one of hæmorrhoids; one of eruption; one of scald; three of contusion; two of strain; one of rupture; one of fracture; one of excoriation; three of inflammation; and two of ulcer. The consumptive patient died, and at the end of the month 14 were in the list, so that the decrease was great, and general.

The wind was between SE. and E. until the 9th; then it was Nly. though variable until the 16th. It then got to W. until the 20th. Then it came to SSE.; and continued S. until the 26th; and afterwards varied between the E. and SW. until the 31st. 5th, 8th, 10th, 17th light rain; and the 4th and 7th, showers with very bad weather. The atmosphere was cloudy or hazy. The thermometer was not below 54, nor above 64. The moon was full the 7th, and new the 23d.

The convalescent fever patients relapsed during the bad weather, and the consumptive patient, who before seemed to be recovering, died the 23d a. m. suffocated with blood in a fit of coughing, the 76th day of his complaining of cough, to which he had been long subject.

It rarely happens that seamen become phthifical without having previously received hurts about the thorax, which they have too long neglected. Among those who have had ship fever, more have had pulmonic affection than any other symptom; but it yields to cortex. Or in other words, pulmonic affection has been a more general symptom this month amongst the fever patients than any other material symptom. But the present pneumonic affection differs widely from either pleuritis or phthisis pulmonalis, because this yields to the liberal use of the Peruvian bark, while those affections are extremely aggravated by the use of the bark.

I am inclined to think that phthisis pulmonalis more frequently arises from chronic than from active inflammation. But I shall have occasion to speak more fully on this subject hereafter.

On the 4th, grog was served to the people, and wine on the 8th. We got some lemons and oranges out of a Portuguese ship. I hear that the fleet in general is pretty healthy, except the Bellona, Cumberland, and Marlborough.

The Bellona, I am told, has buried 27 men since
we

we left England, and has 108 on the sick list; that the Cumberland has buried 15 since we left England, and is now very sickly. And I afterwards learned, that the Marlborough, after having returned to England in June, besides 14 men who died between England and Gibraltar, lost 40 men, who died at the hospital. On the 16th, our wine was out; and the last of the rum was served.

On the 17th, we were supplied with a fortnight's spirits from the Britannia. We heard of the French fleet being out in detached squadrons, and having taken our St. Eustatius convoy. Rear-Admiral Digby, with eight sail of the line, of which our ship is one, and two frigates, was ordered to cruise off Ushant a fortnight. The Nonsuch two days ago, when it was her look-out, had 70 men killed and wounded in an action with a French line of battle ship. Our passengers were sent on board the Royal George going into port with the rest of the fleet; from which we parted off the Land's End. On the 20th, the Medway and Repulse joined us. 21st, a man who lay on board the Crescent, and had the fever, relapsed a second time. The Repulse and Prudente parted from the fleet. On the 27th, p. m. we chased and spoke three sail of the line and one frigate, of Russian ships, from Lisbon. 28th. I hear that the Prince George, Admiral Digby's ship's company, are remarkably healthy, probably owing to their being always served either with wine or beer.

But no ship was more healthy than the *Edgar*. Great pains were taken to keep the ship and people clean and active; and temperance was enforced by punishing irregularities. One division of the people continued to air their bedding and clothes every good day; and the sick or convalescents' beds and bedding were aired every day regularly as before.

The antiphlogistic method of treating the fever prevails in the fleet, as hitherto has been the custom.

JUNE.

The number of sick has been greatly increased; and especially of fever patients, of which 22 complained; besides two of scurvy; two of rheumatism; three of head-ach; one of cough; two of fore throat; one of epilepsy; three of ophthalmia; two of hæmorrhoids; one of scald; thirteen of contusion; three of strain; one of excoriation; one of wound; one of inflammation; one of diseased testicle; one of furuncle; one of cancered lip; and one of ulcer: in all, 62. Four were sent to the hospital; one for fever; two for rheumatism; and one lame, convalescent fever patient.

There were 26 in the list at the end of the month; which was a considerable increase. The 3d, we arrived in Plymouth Sound, after being 81 days out of port, nearly 12 weeks.

Gibraltar was no port to us, as we were under
fail

fail mostly all the time we were there. 7th, I went ashore on leave.

The 11th, Captain Gower was superseded by Captain Elliot. On the 12th, the ship sailed with the squadron, commanded by Admiral Darby and Sir John Ross, which consisted of ten sail of the line. Four men, who have been venereal patients, complain of ophthalmic symptoms. I never met with a similar circumstance to this before. The men on board the Queen were very sickly during the cruise.

The wind in the beginning was Wd., and from the 12th to the 26th between the Wd. and Nd.; then Ely. one day. It got back to W. the 27th, and was afterwards between NNE. and E. to the end. The atmosphere was often hazy, sometimes cloudy, and clear the 27th, 28th, and 29th. On the 5th and 16th, light rains. The moon was full the 6th, and changed the 21st. The thermometer was not below 60, nor above 66.

The irregularity of a ship's company in port, generally depends on what money and credit they have; and the number of surgical cases while the ship is in port, will be in a ratio to the irregularity of the ship's company. But this frequently is not the only bad consequence of their intemperance. It is also too often the cause of rousing dormant infection which otherwise would have died away, by persevering in the modes of treatment and preven-

tion of it as already hinted at: but of which the former will be more particularly described hereafter. Besides, infection may certainly be renewed and kept alive by men entering from hospitals, or other seminaries of infection; from men visiting on board of sickly ships; or from people belonging to such seminaries of ship fever being permitted to visit on board of healthy ships.

JULY.

The number of sick on the list decreased very considerably this month—38 patients only having complained; viz. twelve of fever; two of pleuritis; one of belly-ach; one of diarrhœa; one of retching; one of indigestion; one of scurvy; three of head-ach; three of sore throat; one of ophthalmia; one of nephritis; one of scald; five of contusion; two of strain; one of white swelling; one of furuncle; and one of ulcer.

Fifteen were sent to the hospital; viz. two convalescent fever patients; one with head ach; two with scurvy; one with rheumatism; one with cancered lip; one with white swelling; one with schirrous testicle; five with ulcer; and one with L. V. 11 remained on cure at the end of the month.

2d. The Sultan and Magnanime passed with a convoy to the Westward.

3d. The beer was out, and half an allowance of wine was served.

7th.

7th. We arrived at Torbay ; and next day we got fresh beef and greens off for the ship's company. We failed at noon, and arrived on the 9th at Spithead—25 patients on the sick list ; but including venereals and other slight cases to whom medicines are given, makes the number 58, which are reported in the weekly account.

On the 14th, prize money was paid to our people.

On the 19th, we failed under the command of Vice-Admiral Darby and Sir John Ross.

On the 20th, Captain Elliot again hoisted a broad pendant, and Captain Boston was appointed to command the ship. 21st, The fleet consisted of twenty-one sail of the line.

On the 24th, Admiral Digby joined us with three sail of the line. Molasses, and four crout served to the people as usual. The 26th we saw seven sail of Russian ships of the line. On the 30th, the *Lively* was retaken ; and two brigs taken from the French.

I was informed that two of the fever patients in the list came from the *Warspite* guardship in the harbour.

The wind veered from ENE. to S., SSW., and W. From thence it veered to NW. ; and from between NE. to N. At last it came to W. The 3d and 8th light rains. On the 6th and 7th, showers and thunder.

The moon was full the 6th ; and changed the 21st.

The

The thermometer was not below 62; nor above 72.

The atmosphere varied between cloudy and hazy, and sometimes was clear.

AUGUST.

The number of sick was less than in any month I was on board the *Edgar*; seven patients only complained of fever; one of abdominal obstruction; one of scurvy; three of head-ach; one of epilepsy; one of hæmoptoe; two of contusion; one of excoriation; three of wound; two of furuncle; two of ulcer; and an accident of a boy being killed by a fall. All the patients admitted amounted to 25. At the end of the month seven remained on cure.

The wind was chiefly N. though variable. Part of the 6th, 7th, 8th, and 9th it was calm. It was then variable until the 12th, when it became Nly. until the 16th, then it was Ely. The 17th it was Wly. and from N. to NW. until the 20th. The 21st it was E. It was then S. until the 25th. Afterwards it was W. until the 30th, and from SE. to SW. afterwards. On the 21st and 23d, it was calm at times. The 28th, it blowed a fresh gale: 1st, 4th, 5th, 6th, 14th, 18th, 19th, 24th, 25th, 26th, 27th, and 30th light rain; 28th showers; and dews generally in the night. The atmosphere was either hazy or cloudy, very seldom clear. The thermometer was
never

never below 63, nor above 78, which was the afternoon of the first.

1st. Admiral Digby, on board the Prince George, parted company from us last night; he is going to command in America. The *La Prudente* joined us; she took three prizes coming out.

The 3d, the beer was out, and wine was served to the ship's company. On the 8th, a boy was killed by a fall down the main hatchway. The 10th, the men were served grog. 15th. Wine was served to the people. On the 16th, a brig brought dispatches to the Admiral. We were informed, on the 17th, of the combined fleet being out and spoke with. The 20th, Captain Boston very ill of fever, though he does duty.

The Commodore struck his pendant on the 21st, and went and hoisted it on board the *Victory*. He took one lieutenant, five midshipmen, his secretary, and servants with him. Twenty prisoners were sent on board of us. We learned that the combined fleet consisted of 56 sail of the line; and of Admiral Parker's action with the Dutch. On the 25th, we arrived with the fleet in Torbay, and heard that the combined fleet was off Scilly. The 27th, fresh beef was served to the fleet. Our people had broth every day, and ten shillings were allowed to purchase greens every day for the broth. The bad weather forced the French fleet into port for shelter, on the 28th.

SEPTEMBER.

The list increased nearly double this month : 46 patients having complained ; viz. fourteen of fever ; one of dysentery ; five of belly-ach ; one of indigestion ; two of scurvy ; one of rheumatism ; one of head-ach ; one of cough ; one of ophthalmia ; one of tooth-ach ; three of eruption ; seven of contusion ; one of concussion of the brain ; one of strain ; one of fracture ; two of wound ; one of inflammation ; and two of ulcer. Fifteen remained on cure at the end of the month.

The winds were light and variable until the 11th ; then ENE. for two days. It was W. the 13th. Again light and variable until the 17th ; then Nly. until the 19th ; between NW. and N. until the 26th, when it was variable. On the 27th it was Nly. On the 28th, ENE. and variable, with calms to the end. The 24th, it blowed a fresh gale. The atmosphere was either hazy or cloudy. The 4th, 5th, 17th, 22d, 23d, 24th, 25th, and 27th light rain ; 11th, dew ; the 15th, and 19th, showers ; the 15th also thunder and lightning. The moon was full the 2d, and changed the 17th. The thermometer was not below 62 nor above 72, unless when the sun shone on it.

1st. We shifted our berth, to anchor with the rest of the fleet in the form of a crescent.

On the 3d. The *Agamemnon* and *Prothée* came in ;

in; and on the 5th, the *Arrogant* came in very sickly. On the 6th, the *Hercules* joined us. We began to serve beer to the men yesterday. The 10th, the beer being expended, wine was served to the ship's company. We were ordered 15 tons of beer, and three casks of four crout. But we got scarcely twelve tons of beer, and no four crout; owing to the officer of one ship having taken more than double the quantity he was ordered to take. This selfish and illiberal custom, which is too prevalent, injures the service very materially, instead of promoting it. For some little time past our lower decks, when washed, have not been dried as usual with fires. The consequence of which is, that the number of fever patients is increased. The Commodore returned on board from the *Victory* with his retinue, and hoisted his pendant again. Admiral Kempenfelt hoisted his flag on board the *Victory*. On the 11th, some victuallers came into the bay. The men scrubbed their hammacoes last night though the weather was very damp. More of the men complained of fever.

The 12th. I was slightly infected with fever last night in the sick berth. 13th. his Royal Highness the Duke of Gloucester was on board of the Admiral's ship this afternoon. 14th, the fleet sailed a.m. anchored again p.m. The 15th, the fleet, consisting of 27 sail of the line, sailed. If I was not misinformed, the *Arrogant* was ordered into port,

port, being disabled by the sickness of the ship's company; 27th, grog was served to the people; and we had no wine for the sick.

OCTOBER.

The number of sick decreased. Thirteen only complained of fever; one of belly-ach; one of diarrhœa; one of scurvy; three of rheumatism; three of head-ach; one of cough; two of ophthalmia; one of nephritis; one of scald; three of confusion; three of strain; two of wound; two of furuncle; one of abscess; and one of ulcer. Thirty-nine patients in all were admitted, and twenty-two remained on cure at the end of the month.

The wind was variable and calm at first; and then varied between SE. and E. until the 6th. It afterwards kept between S. and W. until the 14th; when it became Nly. for two days, and afterwards light and variable until the 19th. It now was Nly. until the 23d; and continued so; after which it was little wind, and at times calm; but still Nly, until the end of the month, varying but little. 9th, 10th, 14th, 16th, 17th, light rain; and 28th hail, and light rain; 29th and 30th it blowed fresh gales. The atmosphere was chiefly cloudy. The moon was full the 2d; and changed the 17th. The thermometer was not below 58 until the end of the month, when it got to 49, nor above 64.

On the 1st wine was served to the people. The
9th

9th the last of the four crout was served out to the ship's company. The 19th, I felt rheumatic pains for the first time in my life. We were so near the land about Cape Clear, that boats came off to the ships with potatoes and things to sell. On the 21st Sir John Ross on board the Royal George, with the Foudroyant, Dublin, and Emerald being very leaky, parted company to go into port to repair.

On the 22d I got some prize wine for, and began to serve it to, the sick.

The 24th. The three divisions of the fleet separated; the Commodore had charge of the third division. The 25th, we lost sight of the other divisions. On the 26th, the van division was in sight.

30th. We received 43 men out of a cartel ship from Spain, on board of which 30 were ill of fever. On my application the 43 men were stript naked; were well washed in a tub and pumped on; clean flops were put on them; and all their old clothes thrown overboard. I also ordered a dose of Peruvian bark to be given to each of them.

NOVEMBER.

The sick increased in number; and chiefly with fever patients; for which 29 were admitted; two complained of pleurisy; one of belly-ach; two of scurvy; three of rheumatism; one of head-ach; one of fore throat; one of epilepsy; one of tooth-ach; one of nephritis; one of eruption; eleven of
contusion;

contusion ; one of strain ; one of excoriation ; one of fistula in ano ; and two of ulcer : in all 59 patients. With a view to prevent the new infection from spreading, twenty-one for fever were sent to the hospital, nineteen of whom were cartel men ; besides another man who messed with them ; and one man who had been ill before ; one for abdominal obstruction ; three for rheumatism ; one for epilepsy ; one for concussion of the brain, and consequent weakness ; two for contusion ; and one for ulcer. At the end of the month there were 14 remaining on cure.

The wind was Wly. the first day ; and we arrived at Spithead the second day.

Our people were paid both wages and prize money, and were very irregular.

Notwithstanding the care I took to prevent the cartel men from having fever, they were so strongly infected before they came on board, that nearly one-half of them were ill ; and though our men were uncommonly irregular, not one was ill of fever but the man who messed with the cartel men, and one relapsed case, so effectually was the old infection subdued on board. But it is not to be doubted that the infection would have been again widely diffused amongst our ship's company, had not very great care been taken to prevent it from being disseminated among the people.

DECEM-

DECEMBER.

Notwithstanding all our care, the number of patients decreased very little; twenty-one having complained of fever; three of pleuritis, two of whom had formerly been hurt; two of rheumatism; one of head-ach; four of cough; three of sore throat; one of eruption; one of itch; three of scald; nine of contusion; two of strain; and three of inflammation; and one accident: 54 in all. Five were sent to the hospital and sick quarters; viz. one for fever; one for rheumatism; one for head-ach; one for cough; and one for fistula in ano.

The wind was Ely. then variable; afterwards it was NW. for a short time; then changed between SSE. and S. It came next variable; but returned to S. between which and SW. it continued until we returned to Spithead. 8th, 13th, and 14th light rain; 6th, 7th, and 12th showers. The atmosphere was either cloudy or hazy; and foggy the 12th and 13th.

The thermometer was not below 50; nor above 64. The moon was full the 1st; and changed the 15th.

On the 2d, we sailed under the command of Rear-Admiral Kempenfelt with eleven sail of the line, and one ship of fifty guns. The Ocean joined us on the 11th.

On the 12th, a. m. a numerous fleet of French ships appeared in sight. About noon we stretched between the enemy's ships of war and the ships under their convoy. Amongst the convoy were also two or three line of battle ships; one of which passed close across our forefoot, and fired a broadside or many shot into our ship, which led the squadron, without hurting a single man. Several shot wounded the hull and masts very much, and cut our rigging greatly. Many of the convoy struck their colours as we passed them; and as they passed us. But owing to their not being immediately boarded and taken possession of, numbers bore up and joined their ships of war to leeward. Nineteen sail of the heaviest ships of France, and two large ships armées en flute, composed the enemy's line.

On the 14th, the *Agamemnon* and *La Prudente* were dispatched to dog the enemy's fleet; of which the *Agamemnon* picked up five sail. The *Arethusa* was sent into port; and the fireship was dispatched to the West Indies with information of the enemy's fleet and transports being bound thither.

On the 15th fifty prisoners were sent on board of us. Wine was served to the people on the 16th. One of the enemy's convoy was sunk on the 12th by one of our ships falling on board of her. The 19th one of our men fell overboard and was lost.

On the 21st, we arrived at Spithead.

JANUARY,

JANUARY, 1782.

Twenty-four men complained of fever this month; five complained of pleuritis; one of dysentery; one of cough; two of sore throat; one of epilepsy; one of nephritis; one of hæmorrhoids; one of eruption; ten of contusion; four of wound; one of fracture; one of inflammation; and two of ulcer: 55 in all were admitted. 6 were sent to the hospital; viz. four for fever; one for rheumatism; and one for contusion: 25 in the list at the end of the month.

One man broke his left fibula; and one of the sentinels shot off his left fore-finger by his piece going off accidentally.

The ship was docked in Portsmouth harbour this month.

FEBRUARY.

The sick list decreased in number—particularly of fever patients. Those admitted were 17 of fever; one of peripneumony; two of pleuritis; two of rheumatism; one of sore throat; one of eruption; two of itch; ten of contusion; six of wound; one of inflammation; two of abscess; two of scald; and three of ulcer: 50 in all. Four were sent to the hospital; viz. one for fever; one for rheumatism; one for cough; and one for contusion. Twelve remained on cure at the end of the month.

I was seized with a most violent rheumatic pain, from walking in a very cold stormy night across a field; the wind was about NE.

MARCH.

The number of patients increased a few on the whole. But 15 only complained of fever; one of pleuritis; two of rheumatism; one of cough; three of sore throat; one of suppression of urine; one of eruption; twelve of itch; four of scald; one of contusion; four of strain; one of fracture; four of wound; one of inflammation; and two of ulcer: 53 in all were admitted. Three were sent to the hospital; viz. two for cough; one was after fever, and the other old; and one with fracture of the thigh: 7 at the end of the month remained on cure. The 8th Captain Boston left the ship; and was succeeded by Captain Moutray.

APRIL.

The number of sick increased; and the number of fever patients increased to 18; three complained of pleuritis; one of pain of the stomach; one of belly-ach; two of head-ach; six of cough; two of ophthalmia; one of blindness; one of nephritis; two of hæmorrhoids; eighty of itch; fourteen of contusion; one of strain; two of wound; one of inflammation; and three of ulcer; and one accident: 129 in all. Sent 9 to the hospital; viz. one with

with fever ; one with rheumatism ; one with blindness ; one with contusion ; and five with ulcer. 14 were in the list at the end of the month.

We went out of the harbour, and sailed on the 13th with Admirals Barrington and Kempenfelt, and Commodore Elliot. The squadron consisted of 12 sail of the line.

On the 15th, the Queen and Artois joined us.

The 20th, we fell in with three sail of French ships of the line and two frigates, with a convoy. Le Pegase, one of the line of battle ships, was taken by the Foudroyant, and a number of the transports were captured by the other ships. Had we been so fortunate as to have fallen in with them in the morning, instead of the evening, most probably all of them would have been taken. On the 21st, about 50 of the prisoners were sent on board of us. The squadron arrived at St. Helen's the 25th ; and on the 26th we arrived at Spithead with the Pegase.

The wind was extremely variable during the short cruise. The moon changed the 12th. Part of the 16th, 17th, and 18th, the atmosphere was clear ; and cloudy or hazy the rest of the cruise : 21st, 22d, and 25th light showers ; 23d and 24th showers. The thermometer was not lower than 51, nor higher than 62.

The itch was brought on board by some women, and spread very rapidly amongst the men before I

knew it. But it was soon subdued, by rubbing in sulphur a few times.

MAY.

Three men complained of fever; one of rheumatism; two of scald; two of contusion; and one of ulcer, before I left the ship on the 7th; in all nine patients; and there were only twelve remaining on cure then; besides a few slight lame complaints.

Three were sent to the hospital; viz. one with fever; one with cough; and one with ulcer.

CHAPTER VII.

Remarks on the Monthly Review and Table.

TO the class of fever patients; those who were affected with dysenteric complaints; with the complaints of belly-ach; of head-ach; and mostly all those who were affected with cough and sore throat should be added; because they originated *all*, chiefly from the same source. These different appearances arising merely from the habits or constitutions of the subjects infected. By arranging these cases in the class of fever patients, which might without any impropriety be done, the number of fever cases would be 1135—of whom *nine* died. About 1 in 126, and of these it is allowed that the bark failed in two cases only. But stating the number of cases at 869, not one in 96 died.

Of the 56 cases sent to hospitals for fever, *one* was sent in July 1779, before there was any convenience on board for men. *Nineteen* were cartel men, and one messed with those men and was sent with them to the hospital as soon after they complained as possible, to prevent *this fresh infection* from spreading among the people. One returned ill of fever from the hospital, and was sent back next day. A number in a convalescent state were sent as *weak*

x 4

patients,

patients, because the ship was going next day to sea; but could not be received at the hospital until the disease on their tickets was altered from *weak* to *fever* cases. Besides some bad *hands* were sent to the hospital that would have been kept had they been good men. Subtracting all these from the fifty-eight, would leave a very small number. But in either view the inference, that the *worst* cases are always sent to hospitals, does not hold good here.

Of 43 real fever cases sent to Haslar, 3 of them died; which is one in fourteen nearly. Of the two which were sent to Plymouth, none died. Of two sent to Deal and Woolwich sick quarters, neither of them died. Of the eleven sent to Gibraltar, three died; which is upwards of one in four. Of the whole fifty-eight which were sent to hospitals, about six died; that is nearly one in nine.

Respecting the pleuritic patients, under which head are also comprehended peripneumonic cases, to have lost one in nine, in my own opinion, is unsuccessful practice, if the cases are considered simply pleuritis and peripneumonia. But as they were only concomitants, the treatment became extremely complex and difficult. The pain though acute; and dyspnœa though very distressing, with urgent cough, or merely symptomatic affections of infection, could not be relieved, and much less removed by the liberal use of the lancet—though the only remedy,
I had

I had almost said, necessary to cure pleuritis and peripneumonia, because of the faintness and extreme debility which were induced by blood letting, though conducted and repeated in the most cautious manner. And notwithstanding debility indicated a necessity to give the bark—the pain, dyspnœa, and cough interdicted its use; and in some cases these symptoms were evidently aggravated by it. These pereumonic affections, especially the worst of them, seemed to have originated from old hurts, or contusions about the thorax. Hence I have learned from experience, that febrile infection supervening such old accidents, is always attended with danger, and afford a very unfavourable prognostic*.

SCURVY has ever been considered a very dangerous and fatal disease to seamen, and to all people confined within a narrow space, under the influence of bad air, bad water, bad diet, and want of exercise; if, together with these, every circumstance which tends to debilitate is included.

Scurvy, under the circumstances I have just enumerated, when it begins to make its appearance, will ever be found to attack fever convalescents; to attack men debilitated from whatever cause; and next to such subjects, the slothful and the dirty. But fatal and dangerous as scurvy has been to other

* See the Prognostics on Febrile Infection, in Vol. III.

practitioners, it is to me a great comfort to reflect, that I have always found means to obviate its direful effects. Having never been so unfortunate as to lose a patient by the scurvy, nor to see more than one patient* die of it, though I have had many patients ill of it under my care. The reason of my having been so successful in this part of my practice is, that, though scurvy is fatal in its consequence when neglected; when due attention is paid to the sick, and when expences are not regarded, it is more easily cured than most other diseases are.

The bark or tonic treatment of my fever patients; my having purchased vegetable acid from time to time; also fruit and vegetables occasionally; and my close attention to the patients' diet and cleanliness, were the only means whence my success providentially was derived. The consequence of this practice was highly beneficial to the public. But the expence which attended it was injurious to my own circumstances. This expence, including a very moderate allowance for myself, always exceeded the pay and perquisites of the ship to which I belonged. So inadequate was all my certain income on board of any ship, to my necessary expences from time to time, that unless I had fortunately received some little prize money, I should have been in real indigence. Instead of deriving any certain surplus from

* See Vol. I. p. 26.

my situation to enable me to live comfortably afterwards.

Why the medical practice in fever and scurvy was not more successful in his Majesty's navy, previous to the period I am now speaking of, I made appear very evidently in a pamphlet, entitled "A Political View of the Indigent Establishment of the Navy Surgeons, published in November 1782," and that it entirely rested with Government to remedy this national evil, by improving the medical naval establishment. On the old indigent establishment of naval surgeons on which I practised, surgeons might drudge on, until age rendered them unserviceable, without being able to make any provision against old age. For which a penurious superannuation, amounting to between fifty or sixty pounds a year, was all the reward they had to look up to and expect*.

A further disquisition on scurvy would be superfluous, after what Dr. Lind, Mr. Thompson, and Dr. Trotter have written on the subject †. But in

* This subject, I have observed in the first volume, has been attended to by Government in 1795-6; but not by any means in so liberal a manner as to hold out an encouragement for young gentlemen of liberal education and talents to enter in sufficient numbers to supply the navy. This is a loss to the service and public of such magnitude, that no expence would in my opinion be too great to remedy at present and to obviate in future.

† But particularly Dr. Lind.

addition to what they have said; and to my own observations concerning it, I must repeat one which I have already noticed as the cause of scurvy, viz. "That grog drank to excess will sometimes produce scurvy, let the patient's circumstances and situation in other respects be ever so advantageous and comfortable." I have seen several instances of this amongst gentlemen. Grog occasions scurvy by destroying the digestive powers or tone of the stomach and intestines; and all manner of appetite for food *. I therefore class grog as one of the principal causes of scurvy amongst seamen of the navy. Where either good beer or good wine is served, scurvy more seldom—I may say very seldom appears, or becomes fatal. While after men have been at sea long, under the circumstances I have mentioned, one fit of intemperance will be sufficient to induce scurvy. Indeed many labour under a scorbutic taint which is not known until their meeting with a slight hurt of any sort discovers it.

But the baneful effect of intemperance amongst a ship's company, not only induces scurvy, but is more evident in many other respects. For scarcely one fit of intoxication happens to the seaman that does not occasion some accident, accompanied with contusion, strain, fracture, or wound; which give rise to inflammation and ulcer; and those again

* It also probably occasions obstructions of the mesenteric glands and liver.

often to fatal diseases. It is melancholy to reflect, that so many healthy men should become invalids, or lose their lives, merely from drunkenness. Few, very few, are wounded or hurt on real service, and rendered invalids in the navy, compared to the number that are disabled; and even lose their lives by the vice of drunkenness. Casuists may refine and expatiate on the subject of cruelty, or of punishing seamen for that horrid vice, as they please; but I am fully satisfied that it would be perfect humanity and benevolence *never*, when a ship is first put into commission, to pardon a seaman for getting drunk. On the contrary, let every one be punished with particular severity in some way or other, to deter them and others from committing this destructive and detestable vice; which would prevent them from accidents and their dangerous consequences—hurts and wounds which they continually receive, either by falling or fighting; and which most certainly follow slowly, if not immediately.

As consequences of hurts may be reckoned, phthisis pulmonalis, or consumption; scurvy, and ruptures. Again, as a consequence of the latter, fever* with its train of evils often follows†. Setting the advantages which would redound to the public service from the sobriety of the people entirely aside—and it is obvious these would be many—it is

* Symptomatic fever is here understood.

† Inflammation; strangulation; suppuration or gangrene.

likewise

likewise deserving of serious consideration and regret, that in the state of stupor and drunkenness, they are guilty of the infernal practice of applying oil of vitriol to their fore shins, *as they call them*, to render their ulcers uncurable for the present ; that they may get invalided. Which was often successfully perpetrated in the American war, and oftener than once by some individual wretches.

I have been told, their manner of accomplishing this intention was, as soon as they were discharged, to make it their business to get their ulcers healed or reduced within as narrow a compass, and as soon as possible ; that they might enter again on board of ships for the large bounties which were given to seamen ; who, owing to their scarcity, were not rejected for a slight fore shin. They no sooner, however, were entered on board, and received all the enormous bounties, than it became their study to reduce their ulcers to their former foul and alarming state, by having recourse to the same disgraceful means they had practised, that they might be sent to the hospital, and again commit the same base fraud which they had done before. In consequence of which it became necessary in various cases to amputate the leg, and it may be said, perhaps, *deservedly*.

But this is no satisfaction to the service, nor society, for the loss of a subject, who might have been long useful and valuable, had not a mistaken lenity in the first instance prevented his being severely punished
for

for his first intoxication—to have deterred him from a repetition of his crime. Should it idly be advanced, that punishment will not prevent some seamen from getting drunk, and that it is cruel to inflict it for such a fault, I must reply, that when punishment for such a crime becomes part of the invariable discipline of a ship, few of the men will be so daring as to venture to do it; and the idea of its being a cruelty to inflict the punishment vanishes, when we reflect on the good that is intended to be effected by it. Besides, should only half the number who do get drunk be prevented from this vice, by rigorously inflicting the punishment, especially when the ship is first put into commission, a very great object will be obtained.

To the consequences arising or proceeding from drunkenness, inflammation with its numerous effects may be added, with many other of the diseases mentioned in the table. Particularly pleuritis, and the other affections which come under the order of phlegmasiæ: and also many of those which are classed under cachexia.

In the former edition, however, I alluded more particularly to external inflammation: as being a more obvious consequence of hurts—whether suppuration followed or not.

So far I have only considered the pernicious effects of drunkenness in a political view. But if considered in a moral view, how much more detestable
and

and criminal is the vice? Very few vices will be found to exceed it in magnitude.

During the fit of intoxication, the individual is perfectly unmanned, and is rendered incapable of performing his duty towards God, towards his king, towards society, and even towards himself. In the latter sense he is not able to put in force the very first law of nature, self-defence, be his situation ever so precarious. Nor is he able to flee from the danger of instant death, whether threatened by fire or shipwreck. Being past the power of resistance, he may be wholly at the mercy of an insolent foe.

How galling to the thinking generous mind must it be, even to suppose in reflection, that during the short beastly indulgence he has had; by being off his guard and duty he has left a post unguarded by which a publick or private enemy has entered and robbed him of his own honour, and insulted that of his country, which ought to be dearer than life itself to him.

When returned to reason, and he looks back on the precipice he has perhaps narrowly escaped; when he reflects how grossly he may have offended the Almighty by the neglect of his duty towards Him who has been the preserver of his life amidst dangers and death; by taking His name in vain; and by ill-treating his fellow-creatures, his family, all that is most dear to him, and by even destroying his own health—What must be his sensations?

Much

Much might be said on the subject; and I hope enough has been said to do away the mistaken lenity of not punishing for the crime of drunkenness.

In a word, there are but very few of the numerous catalogue of diseases in the preceding table, which do not, or may not proceed directly or indirectly from drunkenness.

Respecting the number sent to hospitals, it was unavoidably augmented by sending away bad *hands*, to make room for good men. Some expence and inconvenience to Government may arise from this; but who would not do so, were they commanding ships on actual service, and every moment liable to meet the enemy. I am positive, if it be an evil, it is a very old evil; and a growing evil that will increase in the service.

CHAPTER VIII.

*Symptoms of the Ship Fever which were not observed
on Board the Juno.*

THE first day of their illness some patients complained of heaviness, and of slight lethargic disposition; of hardness and swelling, with pain of the right groin; of soreness of the throat from inflammation, with exudation of pus on the tonsils*; accompanied also with a foetid smell to the patient; and a very offensive breath. An eruption resembling measles was observed.

3d. An angry eruption appeared about the mouth. The patient, when asked to shew his tongue, was unable to put it out; but with great difficulty, from debility and tremour, took hold of it with one hand to pull it out of his mouth downward. This happened in a relapse case.

4th. Hiccough in some cases which terminated

* This discharge at first is perhaps serum, and by degrees acquires the appearance of pus.

favourably ;

favourably; and in one case which ended fatally with convulsive catching; difficult expectoration of bloody and extremely viscid phlegm.

6th. Profuse hæmorrhage from the nose.

7th. The last symptom mentioned the 3d. Costiveness was complained of; and yellowness of the tuniçæ albugineæ oculorum was observed.

8th. Perpetual dryness of the mouth, and a yellow suffusion over the body and eyes.

9th. Pulling out the tongue as on the 3d. Swallowing what was expectorated by cough; and rattling in the throat were noticed.

10th. Pulling out the tongue, as mentioned on the 3d.

13th. Provoking tendency to retch, by putting the fingers of the left hand into the mouth as far as possible, and pulling the tongue, while the patient saw no person, and picking his teeth afterwards with his fingers.

14th. The eyes appeared yellower sometimes than they did at others. The cuticula separated and peeled off. Paralysis and an uncommonly large and healthy-like stool were observed.

16th. Rigidity of the limbs.

19th. Vomiting watery stuff only, though other things were in the stomach.

26th. Expectoring extremely viscid and bloody phlegm.

It is remarkable that, virulent as the infection frequently was, no petechiæ ever appeared on any of the patients.

Could this possibly be owing to any other cause than the bark having been liberally and early administered?

CHAPTER IX.

Cases which terminated fatally.

CASE 1.

THO. WAKELAND, marine, aged about 25; of a thin habit; and inclined to drink; complained the evening of the 25th of April 1780, of being seized with giddiness; alternate chills and heats; lassitude and debility. He was ordered an emetic immediately, and a sudorific at bed time; and sage tea with nitre to drink throughout the night.

2. No remission a. m. and was costive. I ordered the common purging draught, and the bark twice p. m.

3. A slight remission after perspiring in the night. I prescribed a drachm of the powder of bark every two hours; and drink ad libitum.

4. After having passed a very bad night from raving; he complained of dyspnoea, with pain at the præcordia, and cough at times. The pulse was quick and small, and the skin moderately cool. I prescribed as I did yesterday for him. P. m. slight belly-ach.

5. He raved in the night. The tongue was brownish; very foul; and rather shrivelled. His skin was cool; and the pulse was smaller and quicker than natural. He thought himself better, though the countenance was much diseased. I prescribed the bark as on the third; and a little wine to be added to his drink.

6. The cough and pain about the præcordia were more urgent; and the debility was manifestly greater this morning. His medicine was repeated, as yesterday; and the præcordia were anointed with tincture of cantharides. In the afternoon I gave him five grains of salt of amber with a dose of his bark.

7. A remission after moderate perspiration. He repeated his medicines. P. m. an exacerbation came on. He continued his bark as before; and every sixth hour, in a dose of his bark, he took nine grains of salt of amber. An epithem was applied to the præcordia; and a clyster injected.

8. There was a remission. His tongue was much cleaner; but he put it out to shew it when desired with much difficulty, as he had done for some days past. He had two copious stools with the clyster last night. The pulse and skin were in the same state as on the 4th day. I gave him his bark every three hours; and wine as on the fifth day of his illness.

9. He was disturbed in his sleep through the
night

night with wandering. In the morning he thought himself better; but could not put his tongue out until he moistened the mouth and the tongue, it was so dry and rough. The pulse was much firmer; and the skin was now hot and dry. I made no other alteration of his medicine, than adding to each dose of his bark five grains of crude salt ammonia in powder.

P. m. a most violent exacerbation was brought on by his messmates having given him wine indiscretely. He laid hold of his tongue with his hand, and pulled it out of his mouth, when he was asked to shew it. The dyspnœa was extreme; during respiration the thorax seemed to be pulled upwards and downwards with vehemence, as well as the trachæa arteria, which at the same time was much projected at every inspiration. The countenance was dejected; the skin was very hot, and quite dry; the pulse was rapid; the face was covered with sweat, and he was at times speechless. Blisters were applied to the epigastric region instead of the epithem; half a grain of tartar emetic was given him occasionally, and an opiate at bed time.

10. A degree of rattling in the throat was observed last night. He had two loose stools from the tartar emetic. At eight this morning a remission was perceived; and he complained of the blister. P. m. he rambled constantly. I gave him the bark as I did yesterday; and wine occasionally.

11. In the morning his pulse was firmer and more regular ; in other respects he continued as yesterday. His bark and wine were continued. P. m. a severe exacerbation returned ; respiration was extremely laborious ; during which the abdomen was more agitated than the thorax ; the same appearance about the larynx in respiration as on the 9th ; the rattling was more perceptible ; and the lower extremities were cold. I gave him twenty drops of Thebaïac tincture at bed time.

12. He breathed with more apparent ease ; but with a disagreeable noise. The countenance was hippocratic. His medicines and wine were continued. P. m. he complained of uneasiness about the abdomen ; and the lower extremities continued cold. A clyster was injected which procured him one copious stool. With his anodyne he took half a grain of tartar emetic.

13. A. m. he provoked vomiting by putting his fingers down his throat, and pulling his tongue out of his mouth when he saw no person ; and afterwards picked his teeth—I suspected he had worms. 4 p. m. the upper extremities became cold, and at eleven he died.

In this case it cannot with justice be said that the bark failed. For until the afternoon of the 9th, when too great a quantity of wine was imprudently given him, there was every appearance that he would recover. I was then of opinion, and said at the
time,

time, that he was as much killed by the wine, as if he had been shot; and I am still of the same opinion. Another patient got an improper quantity of wine from his messmates at the same time, and narrowly escaped with his life.

CASE 2.

ISAAC KIDD, seaman, aged about 58, of a bad constitution, complained on the 17th of May, 1780, of the general symptoms of fever, as I was told, for I did not see him, and took an emetic, and the purging draught.

2. He was exceedingly dejected when I saw him, and complained of great debility and lassitude. I prescribed a drachm of the bark in powder four times a-day; and an anodyne at bed time.

3. He complained as before. He took his bark every three hours.

4. I was told there was no alteration about him. The bark was continued as yesterday. P. m. he became worse, I was informed.

5. He was thought to be much the same. His medicine was prescribed as yesterday. He walked about in the afternoon; and about midnight, I learned afterwards, he became speechless and very restless. Nothing more was done for him.

6. He died at three in the morning.

Bad

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Bad weather prevented me from seeing this man more than twice; and that was on the mornings of the 2d and 3d days.

Much ought to have been done for him, when he became worse in the afternoon of the 4th.

CASE 3.

EDWARD NORMAN, seaman, was seized in the afternoon of the 27th of May 1780, with the usual symptoms of fever. I ordered the emetic and purging draught to be given him together immediately, and the sudorific at bed time.

2. There was a remission of the symptoms. One drachm of the powder of bark was given to him four times a-day.

3. An exacerbation, I was told, came on last evening, and went off in the night. Three doses of the bark were prescribed for him. P. m. an exacerbation returned with rambling.

4. He passed the night ill from inquietude, rambling, head-ach, pain about the thorax, and from difficulty in respiration. A blister was applied between the shoulders. A. m. a remission; and at six p. m. the remission continued. His nose bled a few drops. I gave him the bark every two hours.

5. I was informed that about eight last night the exacerbation returned with a great degree of dyspnoea;

ncea; and with rambling; and that he died about five in the morning.

I only saw this man the fourth day of his illness. The ship was at Spithead, and bumboat women brought liquor and strong beer on board, which their messmates, especially when drunk, never fail to give to the sick; and as the two last cases almost certainly fell under this predicament, I think the bark had not fair play in either of them. My doubts in both these cases are the greater on this head because the experiment was not made under my own observation.

CASE 4.

JAMES GRAY, of a very easy and indolent temper; of a lax muscular fibre; and subject to hemorrhage from the nose, complained on the 29th of May, 1780, of the usual symptoms of fever, I was told. The emetic and sudorific were prescribed for him.

2. A perfect remission; and the vomit purged him. The bark was given to him twice.

3. He continued to recover. He was ordered the bark three times.

4. His strength returned slowly. I gave him the bark four times.

5. He relapsed. I ordered the bark every two hours for him; and a blister to be applied between his shoulders.

6. He

6. He complained much of inquietude, heat and thirst. The bark was repeated in the manner it was yesterday. P. m. a violent hæmorrhage from the left nostril reduced him to extreme weakness. Happening to call upon him while the hæmorrhage continued, I found about a pound of blood in the bucket. I ordered his bark to be given him every hour, with ten grains of alum in powder in a little water. And also a spoonful of wine to be given him occasionally. The second dose of the medicine entirely stopped the hæmorrhage; and the alum was then omitted. An anodyne was given him at bed time.

7. He complained of debility and faintness, and also of cough at times this morning. The drachm of bark was continued every hour, and his wine occasionally. P. m. a little hæmorrhage. The alum was again ordered to be repeated.

8. He was harassed by urgent thirst. His tongue was dry and brown; and serum oozed from the nostril whence the hæmorrhage flowed. I gave him his bark and wine as yesterday.

9. He laboured under extreme debility; catchings, or convulsive twitchings; an unnatural respiration. His cough was urgent; he swallowed what he expectorated; and fordes collected about his mouth. Besides his wine he took his bark every two hours with four grains of salt of amber and sal ammonia.

10. About

10. About midnight a violent exacerbation came on, with dyspnœa and great oppression about the præcordia. His medicines were repeated as yesterday; and a blister was applied to the præcordia. P. m. raving; inquietude; and the cough were distressing. When he was asked to put out his tongue, he pulled it out of his mouth with his hand downwards. He was costive. I ordered a clyster to be injected.

11. He had a stool from the clyster. His tongue was clean, though the teeth were covered with fordes. He raved at times through the night, and was desirous to get out of bed, complaining of weakness only. A convulsive motion of the lower lip; and an alteration of the voice were observed. His medicines were still continued. P. m. I ordered the bark to be given him in the decoction of snake-root; and the wine to be omitted.

12. He was worse. The pulse was quick and weaker than I observed before; and his eyes were generally shut. He took his medicines as before. P. m. ten grains of salt of amber were prescribed every four hours only; but he took his bark every two hours—and a little wine occasionally. He had a clyster injected.

13. The tremours increased; he became speechless at times; but coughed rather less. I ordered one drachm of the powder of bark, and eight grains of sal ammoniac every two hours, with wine occasionally,

ally, and applied blisters to the internal parts of the thighs.

14. His appearance and symptoms differed. A.m. the countenance was more lively, but the tremours, or rather universal paralyfis, with raving and inquietude, continued. His medicines were continued, with the decoction of snake-root. P.m. the paralyfis abated; a subfultus tendinum was observed through the day; and he voided an uncommonly large and healthy-like stool.

15. He had an exacerbation of heat, and inquietude the first part of the night, accompanied with a quick, full pulse; but towards morning a remission was perceived. At noon the paralyfis returned; the countenance was more diseased; and he sweated about an hour. At six in the morning, and at ten in the forenoon he took half a grain of tartar emetic. Afterwards his medicines were prescribed as yesterday. P.m. the paralyfis remitted.

16. He passed the night ill from inquietude, paralyfis, and other symptoms of approaching death. His medicines were still continued. At ten in the morning the half grain of tartar emetic was repeated. P.m. rigidity and continual motion of the limbs, with sweat chiefly on the forehead were observed.

17. About midnight a profuse general sweat broke out for a short time; and he continued perspiring

spiring moderately for several hours. A. m. the countenance tended to the hippocratic; and there was a constant motion of the mouth as if he had been tasting something. The paralysis was elsewhere scarcely perceptible. His skin was moderately cool and soft, and the pulse was firmer and more regular than it had been observed for many days past. P. m. he was extremely weak; and the tongue appeared very sore, or aphthous; though he continued better. He took his medicines every four hours; and a little wine occasionally.

18. About 8 last night frequent catchings, startings, and subfultus tendinum came on; the face was covered with profuse sweat; the pulse was very weak and irregular; and twice he shewed a disposition to get out of bed by putting his legs and arms out; at other times he lay on his back, with his eyes generally shut. His skin was moist and soft. A. m. the countenance appeared better; and eyes were shut. P. m. he was distressed with teasing cough; and was costive. The medicines prescribed on the 15th day of his illness were now administered every four hours, and the most suitable nourishment. An emolient clyster was injected.

19. Between twelve at night and four in the morning he lay quiet; but both before and after that time, he was with difficulty kept in bed from inquietude, and at 8 a. m. he died.

Query—Did this man's death proceed from the
hamor-

hæmorrhage on the 6th? I have no doubt myself but it did; and am therefore of opinion the bark had not a fair trial. Had information been given when the hæmorrhage first appeared, I think it more than probable his life would have been saved, as some means might have been used to stop it; but being left so long to itself it weakened him so much that he could not overcome it.

CASE 5.

GEORGE HOGG, the ship's barber, who was much addicted to tippling, after drooping a month chiefly with cough and various pains, complained on the evening of the 7th of June 1780, of the general symptoms of fever, and cough. I gave him an emetic draught immediately, and a sudorific at bed time.

2. He perceived no alteration. But none of the symptoms were violent. He took an ounce of purging salts in the morning; and the Peruvian bark in the afternoon.

3. He complained of thirst and universal soreness. He took four doses of Peruvian bark.

4. Debility; cough accompanied with pain about the thorax, with anxiety, harassed him. The skin and pulse hitherto were very little hotter or quicker than natural. The bark was repeated four times, and
one.

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one-fourth of a grain of tartar emetic with each dose.

5. A remission. He took the bark without the tartar emetic, as on the 3d.

6. He continued better after a tolerable night's rest. He continued to take his bark four times a day.

7. He was disturbed in the night with frightful dreams. His countenance was always flushed; his pulse quick, and the skin is hotter than natural. The tongue had a boiled-like appearance; or appeared as if it had been macerated in hot water. I prescribed the bark every two hours for him.

8. An exacerbation, after passing the night ill from inquietude. He complained chiefly of perpetual dryness of his mouth. I continued to repeat his medicine every two hours.

9. He complained more of thirst. He still took the decoction of bark and snake-root every two hours.

10. He rested ill from inquietude and wandering dreams; the cheeks were more flushed; he seemed to be in great anxiety; though he complained of debility only. I prescribed the same medicine for him as I did yesterday.

11. After a tolerable night there was no alteration about him; only that he did not take his medicine. He was costive. The bark was prescribed

as before ; and half an ounce of purging salts was added to his first draught.

12. He was restless about midnight ; at other times he dozed insensibly. Debility, and that he had no appetite since he was taken ill, were his only complaints. I continued his bark as before without the salts.

13. In the morning a remission succeeded a profuse sweat ; and an exacerbation came on in the afternoon. He continued to take his bark, and a little wine occasionally.

14. He perspired twice in the night, and started once out of his sleep in a frightful surprise. A remission in the morning. His bark and wine were continued.

15. He had a tolerably good night, having been generally in a moderate state of perspiration ; and felt himself sensibly stronger. I gave him bark, with five grains of crude ammonia in powder ; and otherwise prescribed for him as I did yesterday.

16. An exacerbation with flushed countenance ; and the pomegranate appearance of the tongue returned with despondency, which I now learned he had laboured under all along. He had no stool yesterday. I prescribed for him as on the ninth day of his complaining ; and his wine occasionally to be given him. A clyster was also administered, and a blister was applied between his shoulders. P. m.
a slight

a slight remission; but in the evening an exacerbation returned. The blister pained him.

17. He slept, and perspired moderately in the night which brought on a remission. His medicines were given him as yesterday every hour; and his wine frequently. P. m. he complained of pain about the left ilium; and of profuse diarrhœa, which he said harassed and weakened him exceedingly. Tremours were observed on him at times. An anodyne was administered at bed time according to circumstances.

18. No heat or quickness of the pulse were perceptible. On the contrary the skin was moist; and the tremours were less remarkable after a good night. He wandered a little at times, and was so feeble that he could not put his tongue out. I prescribed his medicines as I did yesterday; and his wine and anodyne to be repeated occasionally. P. m. an exacerbation of the tremours came on. Hiccough harassed him at times; and he complained again of the pain of the ilium. The tongue was enlarged.

19. He rested tolerably; and the diarrhœa which had the appearance of bark was abated; but the tremours and hiccough were distressing. Subfultus tendinum was also observed. I gave him wine frequently; omitted his medicines; and allowed him milk *at pleasure*, which he craved. He retched at times from cough, which had continued, more or

less, all along; and brought up clear watery stuff. An ounce of portable soup dissolved in ten ounces of water, with half an ounce of bark and one grain of opium, were given as a clyster at ten in the morning and six in the afternoon. P. m. the pulse was tremulous at times; but he thought himself better.

20. The hiccough frequently harassed him greatly; I therefore gave him occasionally one drop of oil of cinnamon on a bit of sugar. He spat up sometimes a bloody and extremely viscid phlegm through the night; and had a stool. He became stronger; the pulse was firmer; and he put his tongue out. I repeated the milk and wine as yesterday. P. m. the hiccough; subsultus tendinum; cough; and retching at times became more fatiguing. His strength failed him; and the pulse fluttered.

21. His complaints continued through the night; but he never brought the milk up when he retched. An emollient injection was thrown up; and the milk and wine were still continued. In the forenoon his face was covered with a greasy shining moisture, and the countenance became hippocratic. Was seized with universal paralysis. At two p. m. he died. This is *the one* case wherein I allow the bark failed. But here too the length of time he was drooping before he complained should not be forgot. Because had he made his case known sooner, he might have recovered in a short time.

CASE 6.

JOHN BLAIR was seized the 27th of June, 1780; and complained of the general symptoms of fever. He found himself so much relieved by a vomit and sudorific the next day, that he thought himself well, and went to his duty.

On the evening of the 2d of July, he complained again of head-ach; of great pain about the præcordia; of extreme depression; and of total prostration of strength; and he informed me that he had been seized the preceding evening with shivering; severe head-ach*; and the usual symptoms of fever. His countenance appeared extremely morbid. I ordered the vomit to be again repeated, and the sudorific to be given at bed time; and the bark to be given every two hours through the night.

2. I found hardly any alteration on him for the better. He continued to take the bark; and an opiate occasionally. P. m. he had a very slight remission.

3. He was distressed with diarrhœa; with griping; with extreme giddiness and debility. The countenance seemed bloated. Notwithstanding which the pulse was very moderate; and the skin was

* I predicted the patient's death as soon as I saw him.

cool. At 4 p. m. an exacerbation came on. The bark and opiate were continued; and I ordered wine to be given him occasionally.

4. A remission of all the complaints excepting the giddiness and prostration of strength and spirits was observed this morning. However he coughed at times; and the cough brought on pain about the præcordia. The tongue was brown and rough. P. m. an exacerbation with convulsive catching; hiccough; and dejected countenance came on. I prescribed the medicines and wine freely; applied a blister to the præcordia, and omitted the opiate.

5. I perceived scarcely any alteration upon him. The pulse was very weak and low. P. m. the pulse altered often in the course of the day. Inordinate craving for water to drink, and to go ashore, though he seldom spoke, harassed him. The skin was hot at one time; and the tunicae albugineæ appeared yellowish. The medicines were continued as yesterday. To one dose of his bark half an ounce of Huxham's compound tincture of the bark was added, which disagreed with him. 10 p. m. he took nine grains of the salt of amber.

6. He was comatose; and seldom spoke. Though debility was increasing rapidly, he continued to flatter himself, and to say he was better. The pulse seemed firmer and more regular.

Afternoon, involuntary discharges of urine and fæces came on. The discharge from his blister was

was a dark-coloured fancies, and the blistered part had the same dark-coloured appearance. He pulled, and looked at the bed-clothes; and was very restless. His medicines were continued, and twelve grains of the salt of amber were given to him at ten in the evening.

7. He died at 8 a. m.

His messmate informed me that he was never well after the first attack on the 27th of June. A severe head-ach was his chief complaint then; and he would not continue long enough in the sick list to recover perfectly. He also told me that the poor man had several venereal symptoms about him.

In this case the proper time, between the 27th June and 2d July, to have given the bark in a manner to have recovered him was lost, by his obstinately returning to duty. It is therefore to me very obvious that the bark had not a fair trial.

CASE 7.

JAMES CLARK, aged about 25, had been very ill of fever from the 23d of March last to the 5th of May, when after much difficulty he recovered. But after lurking about the sick berth, and drooping six days, he complained the 28th July 1780, p. m. of alternate chills and heats; of head-ach; lumbago; and of great prostration of strength and spirits. I

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prescribed an emetic; and sudorific draught and
the pediluvium at bed time.

2. He had two stools, and perspired last night;
but the chilliness and lumbago continued. The
bark was prescribed every two hours; and a blister
was applied between the shoulders in the afternoon.

3. He has perspired since yesterday morning;
and rested tolerably last night—about twenty-four
hours—which brought on a remission of the fever
and lumbago; but the head-ach was more trouble-
some. No alteration in the afternoon. His bark
was continued; and an anodyne was given him at
bed time.

4. I found him asleep in the morning; and a
perfect remission in the afternoon. A drachm of
the powder of bark was given in a little wine, four
times a day.

5. Though his medicine was not regularly ad-
ministered yesterday, he continued better. I re-
peated his bark and wine as yesterday.

6. He was got up very early in the morning to
clear the ship, which brought on an exacerbation.
No alteration was made in his medicine.

7. A remission after a good night. He took only
three doses of his medicine.

8, and 9. He continued to recover, but was de-
jected. Three doses of his medicine were given
him daily.

10. He

10. He complained of exacerbation, particularly of the head-ach; of lumbago; and of pain about the breast. I ordered his bark to be administered as on the fourth day; and the blister to be repeated. I perceived no alteration on him.

11. A remission was observed in the morning; but an exacerbation with unusual pains came on in the afternoon. His bark and wine were continued, and an anodyne was given to him at bed time.

12. No remission, and he expectorated a dark-coloured stuff. I ordered all his medicines to be continued.

13. A remission and an exacerbation were observed as on the 11th of his illness, without any expectoration. He continued his medicines.

14. The exacerbation of head-ach; lumbago; and a sense of extreme debility were complained of. No alteration of his medicine.

15. Great debility and depression were perceptible in the morning; and his pulse was firmer in the afternoon. Six doses of the bark; and half a pint of wine were prescribed a. m. and an opiate at bed time.

16. He sweated profusely the first part of the night; passed the middle part very ill from inquietude; and became speechless in the morning. I repeated his medicines as I did yesterday, and applied blisters to the internal parts of his thighs.

17. He

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17. He passed the night ill from inquietude and raving; and died in the afternoon.

This is the other case wherein I allowed that the bark failed. But his being got up so early the sixth, most certainly brought on the relapse.

CASE 8.

JOHN GOLDINGAY, marine, aged about 27, of a strong make, but who had been a few months before very ill in the West Indies—complained in the afternoon of the 16th Sept. 1780, of having been seized the morning of the 15th with chilliness and universal pains; particularly of lumbago. But now universal uneasiness and pains oppressed him so much he knew not what to complain of most. His spirits and strength were perfectly exhausted; and the countenance was extremely diseased; being bloated and fallow, with blackness round the eyes, and these were lifeless. The moment I saw him, I predicted the fatal event. I gave him an emetic immediately, and in two hours after, two drachms of bark in powder every two hours; and ordered the pediluvium, and a blister to be applied between the shoulders.

2. He vomited with the emetic, and had some stools in the night, but he did not find himself relieved, though the pulse, which fluttered last night, was more distinct and firm. I repeated the two
drachms

drachms of bark in an ounce and an half of a strong decoction of snake-root every hour, with a grain of opium occasionally. P. m. he had several stools in the day, and his tongue was enlarged and white.

3. He passed the night ill from inquietude and universal pains, and especially from the pains about the ribs. The diarrhœa continued. But the pulse also continued firmer and more distinct; the skin was soft, moist, and moderately cool; and his spirits were somewhat revived. I prescribed the same medicines for him which I ordered yesterday, every two hours. At noon, he complained of suppression of urine, probably from the blister, and tumefaction of the abdomen was observed. Dulcified spirit of nitre was added to his drink, and a blister applied to his left side. The discharge from the former blister, was a dark sanies. P. m. he voided his urine, and complained of the blister on his side.

4. He was disturbed in the night by a teasing cough; - but the diarrhœa was abated. The skin was soft and moist; the tongue was clean, though still enlarged; and his spirits were very much revived. However, the mouth was incessantly dry, and his countenance was not improved. The discharge from the blister was now yellow and viscid, like a firm jelly. No alteration was made in his medicines.

5. About midnight an exacerbation with great anxiety; despondency; dyspnœa; oppression at the
scrobiculus

scrobiculus cordis, and inquietude; with a quick irregular pulse came on. I continued his medicines, and ordered him ten grains of salt of amber every six hours. A blister was also applied to the other side. At 4 in the afternoon, I prescribed half a drachm of theriac. andromach. with ten grains of the salt of amber.

The extremities now became cold. He wandered a little, and died at 8 o'clock in the evening.

Had he complained the first day of his illness, I have every reason to think the bark would have succeeded*.

CASE 9.

WM. RUSSEL, aged about 20, began to droop, and to be affected with the general symptoms of fever a week before he complained in the afternoon of the 11th of Nov. 1780. I ordered an emetic to be given him immediately, and a sudorific at bed time.

2. He sweated profusely through the night, and was relieved; but his countenance was fallow, and somewhat bloated. I ordered him four doses of bark, and half an ounce of Epsom salts with the first dose.

3. In the morning there was a remission of the symptoms after sweating profusely all night. I gave him the bark four times, and a quarter of a grain of tartar emetic occasionally.

* In a similar case now I would also give wine freely.

4. He complained only of giddiness and debility; though his countenance was much diseased. No alteration was made in his medicine.

5. After a restless night no material alteration appeared on him. I gave him the bark every three hours.

6. He was now afflicted with dysenteric symptoms, though he had continued to perspire since the 4th. He had very little fever on him; but the tongue was diseased. Opium was prescribed with his bark.

7. He vomited his medicine at times in the night and this morning; and appeared very much diseased; though he passed a tolerable night. His bark and opium were continued.

8. In the morning he was in a state of perspiration after a pretty good night, with a remission. An exacerbation came on in the afternoon. He took his bark four times.

9. There was a remission at midnight, and he perspired in the morning. An exacerbation again in the afternoon. I continued his bark four times a-day, to which elixir of vitriol was added; and I gave him wine occasionally.

10. There was again a remission in the morning; and a very slight exacerbation in the afternoon. His medicines were repeated as yesterday.

11. Through the negligence of the sentinels he either fell, or got out of his hammock and tumbled down into the lee scuppers, where he was found
lying

lying this morning quite wet and almost dead with cold. An exacerbation with flushed countenance, and tongue much diseased soon came on. I gave him a cordial draught; immediately had him dried and shifted; and prescribed wine with his bark.

12. He complained of great thirst. The tongue was enlarged, brown and dry, and he was unable to put it out to show it; and of oppression about the scrobiculus cordis. I gave him the bark every two hours, with half a grain of tartar emetic occasionally. In the afternoon he complained of internal heat and thirst.

13. His great thirst continued, with anxiety and inquietude through the night, though he perspired. He was very feeble in the morning; but his tongue was decreased, clean, and soft during a remission, which continued until 10 in the forenoon, when a violent exacerbation came on. I prescribed cardiacs with his bark; allowed him wine; and put blisters on the internal parts of his thighs. He was speechless for a short time, and his face was affected with convulsive twitches and covered with cold sweat. At the same time the countenance seemed bloated; the eyes were lifeless, and the pulse was slow and weak. About noon, there was a slight hæmorrhage from the right nostril.

14. He was harassed with diarrhœa; the pulse was quicker, and stronger; and the skin was preternaturally

ternaturally hot and moist. He complained often of pain in his feet. I prescribed the same medicines as I did yesterday. P.m. the hæmorrhage returned.

15. In the morning I found him asleep; without any sign of recovery about him. His pulse was irregular, quick and small; his countenance appeared very diseased and squalid; and the colliquative diarrhœa continued. P.m. hæmorrhage. I repeated his medicines; and ordered him ten grains of alum with his bark twice.

16. No favourable appearance. The tremours and other symptoms of dissolution increased. I ordered the medicines as on the 14th.

17. He was harassed with delirium and great inquietude in the morning, after a restless night. An involuntary effusion of tears at the external canthi of his eyes; and he complained of pain of his side. A laudable discharge from the blisters. I continued his medicines. P.m. an exacerbation came on. I ordered him one-sixth of a grain of tartar emetic.

18. A remission came on a.m. and an exacerbation of the tremours p.m. He took the same medicines he did yesterday.

19. Symptoms of death through the night. His bark was given in the decoction of snake-root. P.m. he drank a pint of the ship's beer at once, which he craved much.

20. No

20. No favourable symptom about him. His medicines and wine were continued.

21. He died about noon.

The accident which happened to him the night of the 10th, I have no doubt was the cause of this poor man's death. Before that he was in a convalescent state.

CHAPTER X.

*Cursory Remarks on the Management of the Ship
Fever on Board the Edgar.*

SECTION I.

** Remarks on letting Blood.*

I TOOK notice that the climate, and other circumstances under which I practised on board the *Juno* induced me to think it proper to let blood in a number of cases, especially when the patients first complained ; but further experience, and a careful review of my observations, have convinced me, that it never was productive of good ; but, on the contrary, of mischief ; and having never since found in a much more extensive practice, that one patient has suffered by omitting that evacuation, I can assert, that in a hundred cases it will not be positively necessary to let blood once. A case may possibly

* It is to be remembered that these are the author's remarks thirty years ago. His full sentiments on this important subject will be delivered, *Deo volente*, in the third volume.

occur wherein it may be proper; but I have not met with such a case among several hundreds; unless the patient was previously hurt by some accident; which may alter the case; I therefore caution young practitioners against blood-letting. This caution is the fruit of much experience, having never found myself under the necessity of bleeding one patient for ship fever on board of the *Edgar*.

To strengthen this well-founded admonition I shall beg leave to add the testimony of a friend of mine, the surgeon of a seventy-four gun ship, in 1780, in a conversation on this subject, who told me, that it was his practice to bleed his fever patients; and that it seemed to relieve them greatly; especially when they had fixed pains about the thorax. I advised him to omit the operation in some cases in future; and to treat them with bark and wine occasionally; and to observe whether they did not recover sooner than those from whom he took away blood, and treated in a different manner. The next time we met, he told me "That he had followed my advice, and found that the patients whom he bled became much weaker, and were recovered with greater difficulty than those who were not bled." This is a pointed testimony of an unwilling evidence against his own favourite practice, and I am sorry to say the favourite practice of too many.

SECTION II.

Remarks on Vomiting.

I HAVE already mentioned, that a vomit administered as soon as the first symptoms of contagion are perceived ; or during the cold or shivering fit of the first paroxysm, frequently becomes a preventive of the fever, as Dr. Lind has likewise observed. But the longer it is delayed after this period to administer the vomit—of the less benefit it has proved. Indeed I have seldom found it of more utility than merely to unload the stomach. However early in the disease the patient took the vomit, I prescribed a sudorific at bed time, and generally the pediluvium. The emetic frequently procures several stools and perspiration ; but this seldom is beneficial unless at the very commencement of the fever. When one or more stools are thus obtained an advantage is gained ; because time is thus saved ; it being essentially proper to cleanse the primæ viæ by gentle means, before other means are resorted to.

After what is said, it would be unnecessary to enjoin young practitioners to vomit their patients as soon after they complain as possible. If the patients

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happen to complain in the evening, immediately after the operation of the vomit, a gentle sudorific should be administered, exposing the patient as little as possible to cold; that the perspiration, if any dependence is placed upon it, may be kept up as long as shall be thought proper. But should the patient have been ill several days before he complain, it will be, generally speaking, a loss of time to administer emetics or sudorifics, as it would now be idle to expect relief from vomiting or from sweating.

The emetics which I prescribe are either the pulv. rad. ipecacuan. or tart. emet. in the manner I have already mentioned. But when it is resolved to administer tartar emetic, I would earnestly recommend administering it in small doses, every half hour until it operates; lest the patients receive much hurt instead of good, by giving this precarious medicine otherwise. Because great mischief has been often occasioned by giving it in doses from three to six grains, or what is called a full dose of it at once;—such as universal spasms, and extreme debility which have terminated in the death of the patient.

If the emetic is given before noon, the remainder of the day ought not to be lost. But unless the patient has had a copious stool or two, a gentle cathartic should be given two hours after the vomiting is finished. The cathartic which I order generally is
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the Epſom, or bitter purging ſalts, with, or without, cream of tartar. To ſave time, in many bad caſes, I have given the tartar emetic, and purging ſalts together, in ſmall quantities, repeating them every half hour until a ſtool was procured, and then ordered the Lark.

SECTION III.

Remarks on Sweating.

AT bed time I would adviſe a ſudorific medicine to be adminiſtered in a form moſt convenient to circumſtances, and the limbs to be bathed in hot water, and a little vinegar. Medicines of this claſs may be greatly diverſified. What I preſcribed on board of the Edgar, was either of the two following: Of tartar emetic from half a grain, to one grain, with half a grain of opium made into a bolus; or five grains of ſalt of hartſhorn and half a grain of opium made into a bolus, to be taken at bed time, with drink at pleaſure. But ſudorifics are not to be repeated after the firſt or ſecond night, becauſe they produce no benefit to the patient—but increaſe debility.

SECTION IV.

Remarks on Blistering.

SHOULD the patient have been ailing some days before he complain, and the head-ach be violent, it will be the more necessary to apply a blister between the shoulders immediately. If it was evening before the patient complained, I generally thought fit to give the emetic and sudorific, and to bathe the limbs before I applied the blister. But in many cases I applied it immediately when they complained.

I have already remarked, that unless blisters were applied very early in the ship fever, I seldom found that they ever proved beneficial, except in removing pains about the thorax, which they often effected without mitigating the fever. I am so fully confirmed in the justness of this remark by longer experience, that I would strongly inculcate the application of blisters early, without regarding any theory on blistering, or on the action of cantharides in the beginning of fever, if it is the wish of the practitioners to apply them with good effect. I therefore repeat it as my opinion *, That when

* Dr. Lind is of the same opinion.

blisters are applied early, they often carry off the fever entirely. I must add, however, though contrary to Dr. Lind's assertion and opinion, that I never perceived any good effects by keeping up the discharge which they procure, in the advanced state of the fever; nor in any other respect then; but by removing local pain.

SECTION V.

Remarks on Purging.

THE next day, or the second day of the patient's complaining, I ordered the cathartic to be administered, unless the emetic had procured some stools, which was frequently the case. The purge which I generally prescribed was the Epsom or bitter purging salt, in small quantities, sometimes with a small quantity of antimony, but oftener without it, repeated until it procured one or two loose stools. The sudorific often was administered at bed time, and the blister applied as already mentioned, especially when the head-ach was violent, whether the bark had been prescribed or not. Cream of tartar was sometimes given with the salts.

SECTION VI.

Remarks concerning Bark.

IN some cases I prescribed the bark as soon as the patient complained, without waiting for any evacuation whatever. In other cases I began to give it a few hours after the patients were vomited. But often, I gave it with the cathartic, or with cascarilla; or with snake-root; or with other medicines, according to the exigency of cases. The more dangerous and alarming the state of the patient is, the more necessary it becomes—I am convinced from experience—to administer bark early. But as my chief dependence for the cure was on bark, though it was often necessary to give other medicines along with it, I shall be more particular on this head. I shall also at the same time endeavour to combat the principal objections which theorists advance, against the early use of bark in fever, which objections they found on the tonic, and the constipating qualities of the bark. That it possesses tonic powers in an eminent degree I am ready to allow. And that in some cases it has the power of constipating the bowels, I also allow. But most certainly neither the one nor the other of these properties renders it an improper medicine

medicine for curing fever. On the contrary, its tonic power is the highest recommendation it could have to our notice, for curing fever; and its constipating quality can be corrected by joining an aperient with it whenever the practitioner thinks proper.

I am desirous therefore to know of medical practitioners whether, in a regular series of fever practice, they have discovered any bad effects from an early and liberal administration of the bark in fever. Or if it is only a preconceived prejudice founded on any theory of their own, or on the theory of any favourite author or practitioner, which prejudices them against its early use in fever. I am the more anxious to know this, because though they say it does possess those qualities, they prescribe it for intermittents as the most proper remedy. Now, if theory is to govern the practice in ship fever—theory which deters the physician from administering, bark to cure it—Why does he give up his theory, or by what is he governed in his practice and treatment of intermittents? For in the management of these he ought to remember that the patient, or the animal system, is in a state nearer to perfect health than it is when under the influence of ship fever. Therefore tonic medicines, according to his own theory, are more likely to do mischief in intermittents than they are in a disease which has already reduced the strength of the sick to a greater degree of debility than is occasioned by intermittents. Unless he conceives the
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the system in ship fever to be in a state of inflammation—which there is not the least reason to believe.

It follows then that if his idea concerning the operation of bark in fever is just, his opinion concerning its operation in intermittents cannot be true. Here therefore is an obvious dilemma. The practitioner's theory and practice being at variance; let him choose then which position he pleases. He either contends that in ship fever the sick possess so much strength and vital energy as to render their situation improper for the administration and action of so powerful a tonic as bark. Or he contends, that in intermittents the sick are in such a state of debility as to require the most powerful tonics to strengthen them, such as bark. But that the reverse of these is the fact, no person who is acquainted with the diseases in question can be ignorant. Does bark then possess, when administered in one disease, qualities that it does not when given in another disease? Our theorist's argument wants consistency; for the truth is, this theory is erroneous, consequently the practice which is regulated by it must be so too. For if, during intermittents, the system labours under debility, and requires so powerful a tonic as bark to restore it to a healthy state, how much more must it require when oppressed by so powerfully debilitating an agent as ship fever; and much more does it require tonics to restore it to the healthy state? But so far is bark from being
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an improper medicine, on account of either its tonic or constipating qualities in ship fever, which induces an extremely debilitated state of the system, that it may be administered to people in perfect health as a preventive from fever.

It follows then, that theorists must either give up their arguments concerning the qualities and operation of bark in fever, and find some valid objections against it; or be quietly guided by experience.

Prejudice has been the bane of thousands. Too long did it prevent us from getting one step beyond the line marked by our ancestors. While other sciences are daily receiving improvements from bold enquiry and experience shall the one which is the most essential to man be a solitary exception? While looking with amazement and sympathy on the superstitious and erroneous theories of our fellow-creatures in some of the sciences, and having had resolution and wisdom to think for ourselves, and to improve them, shall we continue to idolize theorists in the practice of physic only; wherein daily experience points out their mistakes? Shall we, or ought we, in complaisance to names and authorities, to continue any longer to be guided by unjust, servile prejudices, founded on false theoretic doctrines, to the manifest injury of the human race? On the contrary, let us regard the fruits of observation and experience gathered with assiduity and unwearied attention to nature, to diseases and to the effects of medicine in various

various regions. Fruits which have been and will continue to be found salutary and efficacious wherever they are properly made use of.

Of the manner in which bark operates so speedily and powerfully as it does in many cases, I do not pretend to know. But the effect of bark in fever is obviously to restore the vital energy, by acting as a powerful stimulant and tonic. Where one patient has died from an early and liberal use of bark in fever, certain I am that thousands have died from a contrary practice. The danger which theorists threaten us with, from an early and liberal use of bark in fever, impresses me with the same idea as if they told me I should possibly fall, if they saw me running out of a magazine of powder, which I knew was immediately to blow up by a train leading to it being already lighted.

To view this important subject in another light, I shall for this purpose suppose that the theoretic reader still retains his former idea of bark, but thinks proper to honour me with a consultation on the following case: "The patient," *he* informs me, "has been bled, vomited, purged and sweated; and has also been blistered, but is not relieved; and that though the symptoms are not violent, nor at present alarming, *he* apprehends danger is lurking about the patient, because similar cases under *his* care have ended fatally." "I am sorry *he* did not confer the honour of consulting me sooner; but

but pray what are the patient's symptoms?" "Various pains, especially head-ach and lumbago; thirst and anxiety; the skin is dry and hot; and the tongue dry and parched; especially during the exacerbation, which happens in the afternoon; the pulse is quicker and fuller than natural; and he has continued nearly in the same state for several days, only that he becomes weaker. Notwithstanding *he* has strictly kept the patient to the antimonial and camphire treatment, besides administering saline mixtures with subacid and diluting drink to promote diaphoresis, and moderate the fever." *In reply*, "I admit that by continuing this method the practitioner may bring on perspiration, and a temporary relief; but *he* will as certainly hasten debility, and a train of far more dreadful symptoms than those *he* intends to relieve. Therefore, to mitigate the present symptoms, and to obviate the future, I prescribe bark liberally in any form that will agree best with the patient, joining occasionally any other medicine with it that may be found proper; taking particular care to avoid nauseating doses of antimonials, and every thing else that can debilitate him, and allowing the patient to drink moderately, according to circumstances, of wine with water, or with toast and water, or vegetable acid in it, if greatly desired. Should the bark disagree with him, either give a full dose of the tincture of opium, or of solid opium, or add wine, or tincture of bark to
each

each dose of the bark ; repeating the dose of each ; or leaving them off as he sees proper. If the bark purges, join opium with it ; and if it constipates the bowels, add a few grains of rhubarb, or of any mild purgative to the bark occasionally ; or administer a clyster when it is requisite. Upon the supposition of its becoming necessary to promote a very gentle perspiration, combine suitable doses of volatiles ; of camphire ; of sal. succin. or of antimonials, with the bark, during the exacerbation ; and repeat them with or without opiates, as appears fit, with the bark. But, I say, carefully avoid profuse perspiration. When the patient arrives at a convalescent state, though he still has exacerbations towards night, continue his bark, gradually diminishing the number of the doses ; allow him more wine ; be now attentive to his diet ; and give him an anodyne every night, until he recovers."

When we meet, *he* informs me, " That our patient is recovered ; though *he* cannot help acknowledging, that he has been treated very differently to the general practice. *He* still, therefore, has his doubts concerning the propriety of it ; and asks me if I would prescribe after the same manner in every species of fever ?" I know not how many species of fever he reckons ; but I would prescribe it, I answer, in every case not arising from actual inflammation, or topical affection—even in measles or small-pox, if they unfortunately appeared where
ship

ship infection was. In both these diseases I have given it successfully, though I never had an opportunity to try it in the small-pox while the ship infection raged. To prescribe bark in that state of small-pox called secondary fever, he allows "is common—but, still unluckily possessed with the theory of the tonic and constipating qualities of bark, judges it improper in the beginning of ship fever, *or of any fever.*"

To end the conversation, I tell *him* that, the sooner the bark is given in fever, the more effectual it will be; and the less will answer the purpose of curing the patient; and that this is asserted not from opinion, nor the authority of any other person, but from the dearly purchased fruit of experience, very often at the risk of the author's life—*experimental truth*; which it is not probable I will sacrifice to theoretic error, or opinion, however so venerable the names who gave them birth, or now support them.

When, and in what proportion, other medicines are to be joined with the bark, the patient's situation, and the judgment of the practitioner must regulate. He must not rest satisfied, however, nor imagine that he has done his duty, on board ship especially, because he has prescribed, let him have done that ever so judiciously. He must be certain, that medicines, while the patients are very ill; that drink and food when they arrive at a convalescent state, are duly and properly administered; and
also

also be informed when incidental symptoms occur, that, if violent, they may be immediately relieved. Should the practitioner be inattentive to his patients, he cannot, in reason, blame his assistants if they are careless, nor find fault with the officious nurse and ignorant attendant for disobedience.

Having already forewarned practitioners against an expectation that bark will prove infallible; I must also acquaint them, that it will very seldom cure ship fever in as short a time as in hot climates it cures remittents which do not arise from virulent infection or animal effluvia, but from marsh effluvia;—more especially should the patients have been ill several days before they complain of ship fever—for reasons to be hereafter explained *. Nor are they to imagine that giving a few paltry half drachms of bark will cure fever, lest they add to the number already too great who unjustly exclaim, “That the bark has failed them.” What quantity of bark may be necessary to cure the patient, must depend on the virulence of the infection, the climate, season, age, sex, and constitution of the patient; and upon other circumstances; but particularly on the goodness of the bark. Consequently, in administering it, regard is to be paid only to the effects, and not to the number, or quantity of the doses; *nor to the colour of the bark.*

* See Volume III. on Febrile Infection.

As in the description of the fever, though it is a faithful copy from nature as it appeared when collected from many hundred cases, it is impossible to mark it with all the individual features of every case which may occur to the reader ; so I wish it to be understood, in delivering my advice to administer bark or other medicines, which though probably they will succeed in curing most cases, I am not so conceited as to intimate a desire to be thought capable of managing every case which may occur under *any* circumstances.

SECTION VII.

Of Diet.

IN a state of convalescency, when diet becomes necessary, the most suitable articles that circumstances afford must be administered in small quantities frequently, without regard to hours or fashion. Wine may then, very properly, be given as part of the diet. Indeed, I am convinced from long experience that bark is not more superior to other medicines in curing fever, than wine is to all other cordials. It is very often necessary to administer it

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throughout the fever; and when judiciously managed during the convalescent state of the patient, it will be found the best corroborant and antiscorbutic.

Viewing the animal œconomy philosophically, we discern the human system to be so beautifully variegated, and the circumstances under which we exist, so extremely diversified, as to arrest our peculiar attention to *every case*. Hundreds of cases, I say, which have fallen under my own observation, I could relate; yet the reader might never meet with one perfectly similar to either of them; or that might not require some variation in the management. They are like the patients themselves, who, though all men, would exhibit great difference in features, constitutions, strength, &c. were an accurate comparison of them to be made! Let the reader also remember that, after the manner of a painter, I have only drawn the outlines of the piece, the finishing must be left to the skill and judgment of the practitioner; and with these etchings, natural and faithful as they are, to hope for success, they must unite with their daily efforts the most vigilant attention especially should they labour under the manifold disadvantages which I experienced.

CHAPTER XI.

Cases to illustrate the Management of the Fever.

As the following cases are intended to illustrate the different heads of the preceding chapter, it is not to be expected that order, as to time when they occurred, will be regarded.

SECTION I.

Cases managed by letting Blood.

My observations do not furnish me with a single instance of fever being cured by letting blood. Having already delivered my sentiments on this head, in the first section of the preceding chapter, I refer the reader to it. I cannot therefore insert one case to countenance or to recommend it.

SECTION II.

Cases managed successfully by Vomiting.

I have repeatedly observed, that vomits administered when the first symptoms of contagion are perceived ; or during the cold or the shivering fit of the first paroxysm, frequently prevent, and even cure the fever. The cases which came under this head within my own observation have been very numerous.

CASE I.

ROBERT DEAN, aged about 20 years, soon after he came from the Conquestadore guardship at the Nore, on the 10th of September 1779, complained of shivering ; of sickness at stomach ; headache ; and of universal pains, especially of the loins. A vomit was immediately administered, which operated well, and procured him a copious stool or two. He slept well, the symptoms were carried off, and next day he only felt himself a little weaker than usual. I gave him two doses of the bark, with fifteen drops of elixir of vitriol, and on the day following he returned to his duty, quite well.

CASE

CASE 2.

MR. KNIGHT, about 32 years of age, a temperate man, on the 19th of September 1779, complained of head-ach ; sickness at stomach ; and thirst. The pulse was rather quicker, and the skin hotter than natural. He had not perceived any chilliness or shivering to precede these symptoms. I gave him an emetic immediately, and the next day he was perfectly well.

CASE 3.

CHRISTOPHER FORSTER, aged about 19, on the 2d of October 1779, complained of alternate chills and heats ; of head-ach ; of universal pains ; and thirst. A vomit was immediately given. Next day he found a little weakness ; took the bark twice, and returned the 4th to his duty.

CASE 4.

JOHN OSBORNE, an East-India mulatto, aged about 18, on the 16th of October 1779, was seized with all the general symptoms of fever. I prescribed the vomit immediately ; the next day he was so well, that I ordered a light diet only for him ; and he returned to duty on the 18th.

I could insert many cases, I say, to prove the great advantage of giving vomits on the first attack of fever; but I hope these are sufficient for the purpose.

SECTION III.

Cases managed successfully by Sudorifics.

WHEN the vomit did not carry off the symptoms of the fever entirely, the patients have frequently been perfectly recovered by the sudorific.

CASE 5.

JOSEPH CLUN, aged about 28, on the 18th of October 1779, was affected with the general symptoms of fever; and not being entirely freed from his complaints by an emetic, which was administered as soon as he complained; I ordered him the sudorific; and next day he complained of a slight debility only. He took fifteen grains of cascarilla bark twice, and returned to his duty on the 20th.

CASE

CASE 6.

JAMES THACKER, aged about 23, on the 23d of November was attacked with the general symptoms of fever; and for the same reason which I described in the preceding case, the sudorific was given at bed-time. On the 24th, being free of every symptom but weakness, I gave him a few doses of bark, and next day he returned to his duty.

SECTION IV.

Cases managed successfully by Blisters.

I MIGHT insert many cases to shew the great benefit derived from an early application of them; but to avoid too frequent repetitions, which are tiresome, I shall only describe four cases which were relieved from the fever by blisters.

CASE 7.

MICHAEL IRVING complained on the evening of the 5th of February 1780, of the general symptoms

of fever, for which a vomit and the sudorific were prescribed in the usual manner. There was a remission of the symptoms next morning; but in the afternoon an exacerbation came on with severe head-ach. I gave him a dose of the purging salts in the morning; and applied a blister between his shoulders in the evening.

On the 7th he was perfectly free of complaints, except the pain occasioned by the blister, and he returned to duty as soon as his back was healed.

CASE 8.

JOHN PUTNAM; aged about 37, was affected with the general symptoms of fever on the evening of the 23d of May 1780. A vomit and sudorific were then prescribed. Next morning he took the cathartic; and at night the sudorific was repeated. On the morning of the 25th there was no remission; the head-ach, giddiness, sickness at stomach, and wandering pains, harassed him greatly. I ordered him the bark every three hours, and a blister to be applied between his shoulders. He passed the night ill from wandering and inquietude; but there was a remission of all the symptoms in the morning, and no return of them happened afterwards. The bark was continued, though seldom, until he returned to his duty.

CASE

CASE 9.

JAMES FARREL, a marine, aged about 20, on the 20th of June 1780, complained of the usual symptoms of fever, for which he took the emetic and cathartic together in the forenoon, and the sudorific in the evening. The 21st the head-ach and prostration of strength and spirits continued. I applied a blister between the shoulders, and ordered him the bark. On the 22d he was free of every complaint but debility, and had no return of the symptoms.

The bark was prescribed until his back was healed.

CASE 10.

JOHN HOWE, about 25 years of age, was seized on the 27th, but did not complain until the morning of the 28th of June 1780, of the usual symptoms of fever, and immediately took the emetic and cathartic together, and I ordered him the bark in the afternoon. On the 29th there was no remission, though he had been vomited, purged and sweated by his medicines. The countenance was much diseased. The bark was administered four times in the day, and a blister was applied between his shoulders. On the 30th he complained of the blister only, and never had any return of the fever, but took the bark twice or thrice a day, until his back healed.

SECTION V.

*Cases managed successfully with the Assistance of
Cathartics.*

ALTHOUGH it does not occur to me, nor appear in my day book that I ever saw a patient cured of fever by cathartics alone; yet I have often found it necessary to prescribe them after the vomit and sudorifics to perfect the cure. I shall only insert two or three cases in confirmation of this remark.

CASE 11.

Mr. MITCHEL, aged about 22, though in appearance a strong healthy young man, having on the 5th of October 1779, been on duty on board the Dunkirk guardship, where the ship fever was very virulent, complained the day following of fever. The pulse was quick; the skin hot and dry; his head ached; and he was much harassed with griping; depression of spirits; and purging. I ordered him a vomit and diluting drinks. On the 7th he was greatly relieved, after the vomit, which operated likewise by stool and perspiration; but the purging symptoms were not gone. I therefore ordered him a cathartic, and on the 8th he returned to his duty.

CASE

CASE 12.

RICHARD SULLIVAN, about 25 years of age, on the 4th of November 1779, was affected with shivering; head-ach; and purging. An emetic was administered; and next day, as the purging and the symptoms of fever still continued, he took a gentle cathartic; and returned to duty perfectly recovered on the 6th.

CASE 13.

JOHN CUMMINGS, aged about 24, on the 9th of November 1779, was seized with alternate chills and heats; head-ach; and universal pains. I immediately gave him the vomit; and the sudorific at bed time. The 10th, the head-ach and universal pains, though alleviated, were yet troublesome to him. I prescribed a cathartic; and next day he found himself perfectly well.

Though the preceding thirteen cases soon terminated favourably, they on the first attack were so distinctly marked cases of fever, that none of them could with prudence or safety be left to themselves, that is, to the *vis medicatrix naturæ*, more particularly as infection prevailed in the ship. Their happy and speedy termination therefore shows plainly the great advantage to be derived from an early application

application for assistance. Whether the morbid^{ic} infectious matter was carried off by these gentle stimulant evacuations; or by their stimulating power alone, the system was restored to its healthy state, is of no consequence to know. But it is of great importance, I say, to be informed of the advantages to be attained by the early use of means in ship fever. I am hopeful therefore they will prove a very useful lesson to young practitioners to remember the adage, *obsta principiis*. Experience will teach them, that in no instance of medical practice is early attention more requisite to or better rewarded than in *ship fever*.

SECTION VI.

Cases managed successfully with Bark.

I NOW found by experience Peruvian bark, in the successful treatment of ship fever, compared to any other medicine, to be not only the *sheet*, but also the working *anchor*. I shall necessarily be more full on this subject than I have been on any of the five preceding ones. Hence it will fully appear to the reader how innocent and efficacious the bark is
when

when administered freely at the commencement of fever, even in cases wherein neither an emetic nor cathartic have been previously prescribed. Of many hundreds of cases, which have been thus successfully managed, I shall only insert a few; and conclude with some inferences.

CASE 14.

GEORGE ALEXANDER, aged about 36, somewhat slothful in his disposition, was seized the 25th. of October 1779, with great prostration of strength and spirits; or with faintness, as he expressed himself. On the 26th, about 11 in the forenoon, he was brought to me, immediately after he had recovered out of syncope, into which he had fallen suddenly some time before. His complaints were extreme weakness; lassitude; and confusion of his head. The countenance was greatly diseased; the pulse was languid; and his skin felt cold to the touch. I immediately ordered a vomit for him; and two drachms of bark to be taken an hour after the vomiting was ended, and to be repeated thrice in the afternoon. In the evening he became hot and thirsty.

27. After having passed a good night, I found his fever very moderate in the morning; and he only complained a little of his head-ach; and of universal
foreness

foreness. I ordered his dose of the bark to be continued every two hours.

28. He felt himself easy though weak, and had very little fever or thirst on him. An ounce of bark was prescribed for him; and half an allowance * of wine.

He afterwards continued to take his wine, and half an ounce of bark daily, until he returned to his duty on the 1st of November.

CASE 15.

WILLIAM HOGARTH, aged about 18, with a bloated countenance, and of a lax muscular fibre, on the 14th of January 1780, was attacked with head-ach at one in the morning, which soon abated. But about 10 in the afternoon he fell down on the deck in syncope. As soon as he was recovered from the syncope, by the use of sp. C. C. he took a vomit and went to bed immediately after its operation.

15. He passed an indifferent night, and in the morning complained of great pain across the os frontis. The tongue was beginning to grow black, and the lips to be covered with fordes. The pulse was very quick; and his skin and muscular flesh felt exceedingly hot, and preternaturally soft and relaxed. In

* 'Tis about seven ounces by measure.

the morning I ordered the usual cathartic, as he had no stool by the vomit. At 11 in the forenoon I was informed he had again fallen into syncope. Two drachms of the Peruvian bark were prescribed every two hours.

16. He complained of debility, and of being a little giddy. I ordered him to take his bark every three hours. I was informed that he had been at his quarters during the action with the Spanish fleet in the afternoon. Having had no return of the fever afterwards, he took no more medicine.

CASE 16.

LIEUT. S——s, aged about 31, of an apparent good constitution, on the 26th of October 1779, was affected with heaviness; lassitude; stretching of the extremities; chilliness; and pain, with a little swelling and hardness of the right groin. I proposed a vomit, which he declined taking; and at 3 p. m. a severe shivering came on with head-ach, and universal pains, especially lumbago. He now took the vomit. But the hot fit, with an exacerbation of the symptoms, succeeded; and at night he took five grains of salt of hartshorn with half a grain of opium in the form of a bolus.

27. He said he found himself somewhat relieved by the vomit, but much more by a free perspiration through the night. The groin was much easier;
bu

but the head-ach continued ; and he was costive. In the morning he took the common purge of salts with cream of tartar ; and in the afternoon two drachms of the bark, twice, with a little wine and water.

28. He found himself much recovered after a good night. The bark was repeated four times in the same doses which he took yesterday. He had no relapse ; but continued his bark twice a-day for a few days. He returned to his duty on the 30th.

CASE 17.

WILLIAM COATES, about 22 years of age, of a thin habit ; after drooping some days, on the 5th of November 1779, complained in the morning of fore throat ; he spoke through his nose ; and seemed to have much difficulty in swallowing. The uvula and tonsils were considerably tumified ; and the pulse was much quicker and weaker than natural. The vomit was given immediately ; and in two hours after its operation he took the cathartic. In the afternoon a blister was applied between his shoulders ; and a sudorific given him at bed time, after he had made use of the pediluvium.

6. He was much relieved ; but was costive ; the cathartic salts were therefore repeated in small doses until they operated. In the afternoon I found he continued

nued easier ; having perspired all day. I ordered the bark to be given him twice in the night.

7. The pulse was firmer, but he complained of more pain in the left side of the throat, and the tongue was foul. I gave him five doses, two drachms in each, of the bark.

8. He passed the night ill from the pain of his throat, which occasioned urgent cough. The pain now extended from the thyroid gland down to the sternum, and the pulse was quick and small. I prescribed the bark again as I did yesterday. In the afternoon he complained of alternate chills and heats.

9. The pain remitted. He continued to take his bark as on the 7th ; and he frequently used a gargle. In the afternoon I learned that he had had very irregular or uncertain sweats and remissions through the day.

10. Exacerbation of the pain of the left side of his throat and of the cough. I gave him only four two-drachm doses of the bark.

11. After having passed a good night, there was a perfect remission in the morning. His bark was continued ; and with the first dose he took half an ounce of purging salts.

12. He continued to recover ; but the cough was teasing at times. I gave him one drachm of the bark three times a day. The cough did not leave him until the 20th, and during that time he took

the bark twice a-day ; and a little of an emollient linctus occasionally.

CASE 1

WM. CRANE, on the 8th of November 1779, complained of having been affected the day before with alternate chills and heats, and with sore throat. The tonsils and uvula appeared much inflamed, and were covered with an exudation of serum, assuming the appearance of pus. His tongue was also foul ; and the pulse was quick. I immediately gave him an emetic and purging draught together ; and as soon as the operation was finished, I gave him a drachm of the bark, which was repeated every two hours ; and a gargle to wash his throat with frequently.

9. He perspired in the night ; but the throat continued painful, and the pulse was small and quick. The tongue looked as if it had been scalded. I gave him five two-drachm doses of the bark, and continued his gargle.

10. There was a perfect remission of all the symptoms. I prescribed four two-drachm doses of the bark ; and his gargarism.

11. He continued to recover. I ordered four one-drachm doses of the bark ; and half an ounce of the purging salts, in the morning with the first dose.

12, and

12, and 13. He took his medicines, and returned to duty on the 14th.

CASE 19.

BARNEY CLARE, on the 5th of November 1779, was attacked with, and immediately complained of the general symptoms of fever; for which I ordered the emetic. In the afternoon a violent exacerbation came on with very acute pain in the lower part of the left side of the thorax; the pulse was quick, hard, and full, and the skin was very dry and hot. The vomit gave him several stools, and he took a sudorific at going to-bed, besides using the pediluvium.

6. No remission was observed in the morning, though he had sweated profusely throughout the night. The tongue was becoming black. I ordered half an ounce of the purging salts to be given him with one drachm of the bark early in the morning; and two drachm doses of the bark to be repeated every three hours afterwards.

7. There was a remission of the pain in the morning; but he complained of head-ach; fore throat; and hoarseness, which were aggravated by cough; and an angry eruption broke out about the mouth. The pulse was firmer, however, and his skin and tongue were moist. I gave him five two-drachm doses of the bark.

8. His complaints having gradually remitted, he passed a good night. I prescribed for him as I did yesterday. An exacerbation came on in the afternoon, with acute pain of the side, and cough.

9. About ten last night the symptoms remitted, and he passed a good night. The eruption was drying about the mouth. He took six two-drachm doses of the bark.

10. He slept well in the night, notwithstanding a slight exacerbation had come on before I saw him in the morning. I repeated his bark as I did yesterday.

The cough was urgent at times, but he had no return of the pain of his side, nor of the fever, and he took his bark until the 15th, when he returned to duty. He gradually diminished the number of doses as he recovered.

CASE 20.

Mr. BOON, aged about 32, generally exposed to much fatigue and irregularity, after drooping about eight days, was affected with acute pain in the left side of the thorax under the breast,—which was always affected, he said, when he was indisposed; but was severer some times than at others; besides universal pains; and with heat and thirst two days before he complained on the 5th of March. A vomit was ordered for him, which operated and
procured

procured him several stools; and the bark was administered in the afternoon.

6. He rested ill from the severity of pain at times through the night, and his tongue appeared foul in the morning. I prescribed the bark every two hours. In the afternoon, when he felt an exacerbation of heat coming on with his usual pain, he took a dose of the bark, which he told me, with apparent pleasure, carried both off in ten minutes after.

7. He enjoyed a good night, and had no considerable exacerbation afterwards. The bark was continued until he perfectly recovered strength on the 20th.

This patient had the fever three different times, accompanied with the pain of his breast; and always recovered by the same management.

CASE 21.

JAS. MORRIS, on the 7th of May 1780, complained of irregular chills and wandering pains; his countenance was fallow and bloated, and he seemed to breathe with some difficulty; and there was a morbid fetid smell about him. I ordered the vomit in the forenoon, and the purging salts in the afternoon; and afterwards two drachms of the bark twice.

8. He passed the night ill from inquietude, headache, and universal pains. He took one drachm of

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the bark every two hours; and half an ounce of purging salts with the first dose in the morning.

9. The fever remitted, but he complained of the other symptoms, and of frequent cough. He continued his bark as yesterday prescribed.

10. He complained in the morning of exacerbation of pains, especially about the thorax; of dyspnoea; of urgent cough, and of great difficulty in expectorating a viscid bloody phlegm. His breath was very fetid from his throat being much diseased; the tonsils and uvula being enlarged, and covered with a bloody sanies; the disagreeable smell about him being more perceptible, and he was always costive. To the quantity of bark ordered for him as before, four ounces of fresh lemon juice, and an aperient were added. P. m. the tongue began to put on the most diseased appearance I have seen at such an early period of the fever.

11. He complained of much pain of the left side that affected his breathing; of urgent cough; and of not being relieved. I continued his medicines as yesterday; allowed him wine; and applied a blister to his side.

This man slowly recovered, after having had several relapses; and becoming at last scorbutic before he returned quite well to his duty on the 28th of June. He used a good deal of bark and lemon juice, and had also several blisters applied during that time. The discharge from the blisters at first

was

was a yellow gelatinous substance. This case being so complex, made it extremely difficult to manage.

CASE 22.

Mr. DIXON, one of my assistants, aged 22, apparently of a strong habit, drooped for two days with chilliness, soreness, and fullness about the throat, and with loss of appetite; and complained in the evening of the 6th of July of such exquisite universal soreness, that touching any part with his finger gave him pain; and of great lassitude and depression. The tongue was whitish, the pulse was quicker, and skin hotter than natural. He took a vomit immediately; and a sudorific when he went to bed.

7. The fever rather increased through the night, although he had sweated profusely. A purging draught was ordered in the morning, and the bark to be taken in the afternoon, which he neglected. No remission was observed throughout the day. The heat, thirst, and universal pains, with profuse sweating harassed him exceedingly; and he still complained of being costive. At bed time he used the pediluvium, and repeated the sudorific.

8. Though he had several stools in the night; and though the sweating still continued, being very profuse when he moved in bed, there was no remission of the symptoms in the morning. I ordered

him a drachm of the bark every two hours; and a little wine now and then. He moaned; sighed; was often vomited, and purged; and was apprehensive of dying this afternoon; but he sweated much less. I gave him an anodyne draught at bed time, and applied a blister between his shoulders.

9. He passed an indifferent night, there having been no remission of the symptoms. In the morning he craved small beer at one time; and milk at another; and there was a slight hæmorrhage from the right nostril. I continued his bark, and ordered him an opiate occasionally. He also took ten grains of alum in the forenoon on account of the hæmorrhage. The discharge from the blister was yellowish serum.

10. The remission of the fever was more distinct, but he still complained, though in a less degree, of all the other symptoms. I continued his bark, opium, and wine, as before, and gave him fifteen grains of cream of tartar. In the afternoon he was entirely free of fever; and a little blood, quite cold, dropped from the right nostril. He never had any return of the fever afterwards; but he complained of retching, and of exacerbation of pains for several days at times. I continued his medicines therefore, diminishing the number of doses gradually, and instead of opium, the last two or three days of his illness, I ordered him

ten

ten drops of spirit of hartshorn with every dose of his medicine, and more wine.

CASE 23.

Mr. BLAKE, aged about 22 years, apparently of a stout make, and of a robust constitution, on the 13th of June, about noon, was attacked with a severe paroxysm of fever, which terminated by perspiration in a remission about six in the afternoon. He then complained of head-ach; of universal pains, especially lumbago; and of debility, distressing him very much. I ordered him two drachms of bark immediately; and that it should be repeated before he went to bed.

On the 14th in the morning he was much relieved, and in the course of the day took an ounce of the bark. The day following he returned to his duty, and never had a relapse.

CASE 24.

Mr. R., aged about 38, of a healthy, though delicate constitution; temperate in his living; and well-accustomed to different climates, without being affected by changing them, arrived at Gibraltar on the 19th of January 1780, in perfect health; but no sooner did the wind veer round to the eastward, and blow what is called there a *Levanter*, than he
was

was seized with symptoms of fever; and these were always increased when it blew strong*. While this gentleman remained there, he was regularly affected by those winds, and constantly relieved by a liberal use of the bark, without taking any medicine previous to it. Sometimes about a sixth or a fourth of a grain of emetic tartar was joined with the bark. In the mean time he varied his diet and living as little as possible.

On the 10th of April, the wind being about NW. and westerly, blowing strong at noon, after having for a considerable time before been much exposed to infection among the prisoners in the hospital on shore, where his duty led him, he felt the *Levanter* pains coming on about eight in the evening, to which he had hitherto been subject only during the approach and continuance of the easterly winds; and expecting the change of weather, he continued doing his duty, and took a little tincture of bark twice that day

On the 11th, the pains were more severe and wandering. At one moment he had the sensation of being extremely fatigued, and the next he was so easy that he forgot all these sensations. Sometimes there was an unusual heat in the skin; while the pulse was very little affected. He took the tinc-

* When the wind blows strong from the eastward, it blows down off the rock in flurries.

ture of bark as he had done yesterday ; went with languor about his duty, and imprudently walked, and stood a good deal in the sun. After which he went on board in a small, open boat, during the strength of the sea-breeze, by which means he was so much fatigued that he could eat little dinner, and passed the night indifferently afterwards from an exacerbation of the pains.

12. Finding himself worse, the pulse being rather weaker than natural, and irregular, besides having a slight nausea, he took half an ounce of the tincture of bark with one fourth of a grain of emetic tartar three times in the morning. However, perceiving a chilliness come on at ten before noon, he began with the bark in substance ; and took four scruples with two drachms of the tincture in a little tea. At 11 he was not colder, and repeated his medicine. He was so much overcome with fever ; with the severity of the pains, and head-ach, that he lay down in bed at noon ; soon after, he repeated his draught, with eight grains of salt of amber, and drank freely of warm tamarind beverage. The heat became vehement, the pulse was strong and rapid, and the pain darted violently from one place to another during the hot fit, which was succeeded by a profuse sweat, and followed gradually by a remission about four in the afternoon. Notwithstanding the severity of the paroxysm, neither his reason nor
his

his spirits were in the least depressed. But he was astonished to feel himself so extremely weak ; and the head so greatly diseased, though not pained when he got out of bed at four, when the paroxysm was ended. He repeated his bark thrice more, and took ten grains of *sal. succin.* with the bark when he went to bed at eight o'clock, having first had a copious stool.

13. The remission continued, and became more distinct. The head still seemed greatly disturbed ; after he had enjoyed a tranquil and very pleasing night. Though he felt himself extremely weak he went about his duty on board, taking bark every two hours.

14. He had a good night ; and continued the bark. But with the first dose he took an ounce of salts, and two drachms of *crem. tart.*

He persisted in taking bark, and never had any return of the fever while he lay at Gibraltar ; but did not recover his strength until he left it on the 20th of April. He enjoyed a good state of health afterwards.

At bed-time on the 12th, and on the evening of the 13th, he took ten grains of *sal. succin.* without any perceptible effect.

SECTION VII.

Reflections on the preceding Six Sections.

THERE are various circumstances in these sections which are highly deserving of the reader's attention ; but more particularly the cases stated in the sixth, and copied with the most scrupulous chastity ; both as to the symptoms and to the treatment. It was in fact needless to mention this, because I have not to my knowledge stated a single line throughout the work that is not chaste.

What will strike the reader most impressively however, are, I apprehend, the virulence of the infection ; the violence of the symptoms ; the novelty of the practice, and the perfect success which providentially attended the practice on board the Edgar.

The virulence of the infection ; and the violence of the symptoms on board the Juno, were perhaps not milder than those which occurred on board the Edgar. But there is to be observed a material difference in the practice, and in the success which attended it. And whether this difference proceeded from the author's scarcity of bark on board the Juno ; or from his not having as yet acquired that confidence which alone could enable him to practise

tise with sufficient boldness to ensure the same success which he had on board the Edgar, is of no moment as to the public advantage arising from the practice on board the latter. The validity of the practice is the same. However, as I shall have an opportunity to enlarge on this subject hereafter, I defer it for the present. But I thought it right to solicit the reader's attention for a moment, that he might not imagine the essay in the next volume is a new thought of mine.

CHAPTER XII.

COMPARATIVE TABLES.

TABLE I.

Shows the Number of Fever Patients on Board the Edgar, between the 1st July 1779, and the 7th May 1782; and the Number who died of Fever.

The Number of Fever Patients.	The Number who died of Fever.
869 *	9 †

* Besides myself and others who were not entered on the sick list; and also a number of prisoners.

† But it is not allowed that the bark failed in more than two of the nine cases; and even one of the two drooped a week before he complained.

One died of relapse from drinking wine to excess.

Two of them I unluckily saw only twice during their illness.

Hæmorrhage, neglected by the attendants, occasioned the death of another.

One, through the neglect of the attendants, was suffered to fall out of his hammacoe and lie in the wet scuppers, after he had arrived at a convalescent state.

Two of the patients did not apply for assistance until the fever was too far advanced to be overcome.

TABLE

TABLE II.

Shows the Number and Proportion of the Deaths of the Fever Patients on Board the Edgar, between the 1st July 1779, and the 7th May 1782.

Number of Patients.	Number and Proportion of Deaths.
869	9—is $\frac{1}{98}$ and $\frac{5}{9}$
804	2—is $\frac{1}{402}$

In the first line of the table the whole number of the fever patients, and the whole number and proportion of the deaths are inserted.

In the second line, from the number of patients, are deducted the number of fever patients sent to different hospitals, and the other seven patients who died on board under the circumstances before mentioned.

TABLE III.

Shows the Number of Fever Patients admitted into Gibraltar Hospital, between the 19th of January and the 20th of April 1780, from his Majesty's ships; the Number that died; and the Proportion of Deaths among the Fever Patients.

Number of Patients admitted.	Number and Proportion of Deaths.
570	57—is $\frac{1}{10}$

The treatment of fever patients in Gibraltar hospital was with antimony and camphire, until it was altered by my advice; for which Mr. B. the surgeon, thanked me in a very respectful manner; and told me, "That he soon perceived amongst his patients the good effects of the bark treatment."

Any inference from comparative views of success resulting from different modes of treatment, may be thought unfair by some readers, because the worst cases only are supposed to be those sent to an hospital—which was not the case on board the *Edgar*. But admitting the validity of the objection, it is earnestly requested of the reader to point out any other method by which the most successful practice can be known that is less liable to objections.

TABLE IV.

Shows the Number of Spanish Prisoners admitted into Gibraltar Hospital, between the 19th January and the 20th of April 1780; the Number that died; and the Proportion of Deaths among the Fever Patients only.

Number of Fever Prisoners.	Number and Proportion of Deaths.
437	33—is $\frac{1}{13}$ and $\frac{8}{33}$

Besides those who died in the hospital, two died in the boats which carried them over; and two immediately after they landed in Spain when they were sent from the hospital, which makes the number of deaths 37; that is $\frac{1}{11}$ and as 30 to 37. The difference between the result in this and the preceding table, I think may be fairly ascribed to the prisoners being chiefly under the bark treatment, when I could prevail on them to take any medicine.

In favour of the bark treatment, it is further to be observed, that the prisoners were moved from the hospital to Spain under very great disadvantages, besides being too weak to be carried in open launches; many of the sick wanted proper care, proper medicines, and support on the passage. These advantages they were deprived of chiefly by their own impatience to get away contrary to advice; before suitable accommodations could be provided for them.

TABLE

TABLE V.

Shows the Number of Fever Patients sent from the Edgar to Haslar Hospital, between the 9th October 1779, and the 7th May 1782; and the Proportion of their Deaths in that Hospital.

Number of Fever Patients.	Number and Proportion of Deaths.
43	3—is nearly $\frac{1}{14}$

Dr. John Lind, my friend, made trial of many different medicines in cases of ship fever at Haslar; and it is hoped that eminent Physician will communicate the result to the Public.

In our conversation upon this subject, he has very candidly told me “That he had not the same favourable report to make of “Peruvian bark in his practice which my experience had enabled “me to make.” To which I replied, “that it was not to be wondered, because my practice was *primeval* compared to his, “which was too late to give the patient or the practice fair “play.” To this, to the best of my recollection, he has candidly acceded.

TABLE VI.

Shows the Number of Fever Patients sent from the Edgar to Gibraltar Hospital, between the 19th January and the 20th April 1780; the Number that died; and the Proportion of Deaths.

Number of Fever Patients sent.	Number and Proportion of Deaths.
11	3—is more than $\frac{1}{4}$

Of the other four fever patients sent from the Edgar to all the different sick quarters and hospitals, none of them died.

TABLE VII.

Shows the whole Number of Patients sent to Hospitals, and, for the various Reasons before-mentioned, were denominated on the Sick Tickets, and sent as Fever Patients, from the 24th May 1779, to the 7th May 1782.

The whole Number of the Edgar's Fever Patients sent to Hospitals.	Number and Proportion of Deaths.
58	6—is $\frac{1}{9}$ and near $\frac{1}{2}$

What further remarks may be necessary to be made on these tables, will appear in the sequel of the work.

PART

PART III.

OBSERVATIONS ON DISEASES ON BOARD HIS
MAJESTY'S SHIP ROMNEY.*Preliminary Discourse.*

IN my observations on board of his Majesty's ship the Romney, I shall endeavour to lay before the reader the state of the sick, from the 8th May to the 31st December 1782, with as much conciseness as perspicuity will admit, to put him in possession of a further trial of what I have said concerning the doctrine and practice recommended in the preceding part of the work. And on purpose to avoid tiresome repetitions, I shall insert the only case which terminated fatally; and refer the reader to the Essay on Febrile Infection, in the third volume, for what I have further to add concerning the treatment of fever.

The Romney was a fourth rate, the complement was 367 men; and was employed on Channel ser-

vice, chiefly on the coast of France, during that time. Commodore Elliot hoisted a broad pendant on board the Romney; and Captain Wickey was our captain. A number of the officers and midshipmen came with us from the Edgar; and some of the seamen.

CHAPTER I.

Monthly Review of the Romney's Sick List, from the 8th May until the 31st of December 1782, and Meteorological Observations.

MAY.

THE ship was docking in Portsmouth dock-yard; and most part of the ship's company were on leave when I joined the ship. Captain Thomas Lewes superseded Captain Wickey in the command of the ship soon after I went on board. We had no sick this month.

JUNE.

My observations commenced the 11th, after which the number of cases were 48; viz. one of measles; thirty-two of influenza; one of rheumatism; one of ophthalmia; two of itch; one of strain; one of rupture; one of hydrocele; seven of contusion; one of wound; and one of abscess. Sent one with measles to the hospital.

During the last, and this month, the influenza was highly epidemic throughout Europe, as I learned

from report. Various were the opinions of physicians concerning its origin or cause. Some ascribed it to infection. Others, of whom I confess I was one, imputed it to the extremely variable and cold wet spring. That it did not proceed from contagion amounts to a moral certainty, in my opinion, which was grounded on the following circumstances :

Hundreds of people in different ships, in different towns, and in different counties, who had no communication with one another, were seized as suddenly, and so nigh to the same instant of time, as if they had been electrified together. The case, according to report, for it is on that my opinion I say was grounded, was the same in different kingdoms, whether situated on the continent or on islands. The companies of many of his Majesty's ships were very well at bed time, and in the morning there were not hands enough able to do the common duties of the ship. No rank or station was exempted from the morbid attack. Very few escaped its effects, more or less, any where. To reconcile so instantaneous and so general an affection to contagion in the first instance, exceeds both credibility and possibility ; but that, in an advanced state of the disease, it might have been contagious, is so probable, that I will not deny it, nor endeavour to contradict the assertion.

There seems no other way then to account for
such

such general, awful, and calamitous visitations of Divine Providence towards the human race for his wise and unerring purposes, but by ascribing them to a change in the atmospheric air, from an healthy to a morbid state; an operation adequate to His Omnipotency alone. Whether the philosopher attributes the sudden morbid change to a diminution of oxygen, or superabundance of azot, in the atmospheric aura, the wisdom and omnipotent power of the Operator is the same. Universal space is his laboratory, and all the elements are his agents; to the various combinations of which human understanding cannot attain *.

The management of the influenza seemed to originate in the practitioner's idea of the cause; and the success of the treatment depended on the rectitude of his idea. Many considered the disease to be purely inflammatory, and therefore adopted and exercised the whole antiphlogistic plan, under which vast numbers of the sick either immediately died, or afterwards became consumptive and perished.

The method which I recommended to the few cases which fell under my care—for they did not

* The influenza which I now speak of was so frequently described by different writers then, that I did not think it at all necessary to describe its symptoms. I therefore passed it as an object too well known for me to notice.

exceed 60 on shore and on board—was to use a linctus composed of crude sal ammonia, subacids, anodynes, and a very small proportion of antimony. The food I ordered to be of easy digestion, with a moderate quantity of diluted wine in some cases. But for the men I allowed beer; kept them out of bed; and the body moderately warm.

The medicine, in some cases, occasioned slight retching; and in every case it moderated the cough, kept the body soluble, and the skin moist. All of them recovered in a short time.

I took bark in substance myself as a preventive, and scarcely perceived a symptom of the disease. A person of my acquaintance told me, that he took tincture of bark every day, at the time it raged, and never felt a symptom of it.

On board the *Romney*, two or three patients were let blood without my knowledge; but not one patient afterwards.

About this time a child died of the measles on board before I knew of it, and communicated the infection to the people.

JULY.

Seventy-two patients complained in all; viz. eighteen of fever; eight of measles; six of influenza; two of head-ach; one of rheumatism; two of ophthalmia; one of erysipelas; one of eruption; one of epilepsy; one of cough; one of scrophula;
two

two of itch; one of strain; thirteen of contusion; one of fracture; two of wound; four of inflammation; one of abscess; four of ulcer; and two accidents. One of the accidents was of a man found lying on a chest, dead, with his head hanging over the end of it; his face downward, resting on a wad-net. Of the other accident the skull was broke in pieces by a fall from the main yard down upon the starboard steps on the ship's side.

I sent one man with ulcer; five with measles; one with inflammation, topical; one with fever; and one with L. V. to the hospital: 9 in all. There were 14 in the list at the end of the month.

We sailed the 20th, Commodore Elliot on board, having his broad pendant hoisted, and under his command a small flying squadron. As we cruised in the Channel only, I have paid no regard to the weather.

The Commodore sent me some lemons for the sick; and I bought onions for them.

AUGUST.

The sick list decreased considerably—6 patients only having complained of fever; one of pleuritis; four of head-ach; three of cholera morbus; two of rheumatism; one of hypocondriasis; one of ophthalmia; one of erysipelas; one of eruption; two of cough; one of itch; one of sore throat; one of scald; five of contusion; three of wound; one of inflammation; two of furuncle; five of abscess;

abscess; and two of ulcer : 43 in all. I sent two with inflammation ; and one with scrophula to the hospital. One of the fever patients of the 7th ult. died the 13th. He had been long unwell ; and in a very morbid state. We had only six lame patients in the list at the end of the month. We anchored in Plymouth Sound on the 14th ; failed to Cawsand Bay on the 22d ; and from thence we put to sea on the 30th.

SEPTEMBER.

The number of sick increased only one patient this month—44 having complained. Viz. six of fever ; two of pleuritis ; two of nephritis ; one of head-ach ; one of giddiness ; one of belly-ach ; one of rheumatism ; six of ophthalmia ; two of cough ; one of dyspnœa ; four of strain ; one of rupture ; one of hydrocele ; ten of contusion ; one of inflammation ; one of furuncle ; and three of ulcer.

I sent seven patients to sick quarters ; viz. one with pleuritis ; one with head-ach ; one convalescent after measles ; one with cough ; one with hydrocele ; one with lameness from old wound ; and one with ulcer.—We had 19 sick in the list at the end of the month ; which was a considerable increase.

8th. We anchored at Guernsey, and heard of the Royal George being overset and sunk at Spithead.

12th. We failed and anchored at Jersey. On the

the 16th it blowed a strong gale of wind ; which we rode out in a very indifferent roadstead *. 21 cartel men and two prisoners came on board, most of them in a shabby condition. They were washed, had clean flops, and each of them got a dose of bark. 18th. We failed, and anchored at 2 p. m. on the 19th at St. Helen's. 20th. We anchored in the Downs. On the 28th we failed, and anchored at Dungeness.

Query—What could occasion so many cases of ophthalmia? But with as much propriety it may be asked, how different complaints should happen one year to what happen in another, when there is little difference in the weather.

OCTOBER.

Nine men complained of fever ; one of pleuritis ; one of nephritis ; two of head-ach ; three of belly-ach ; two of scurvy ; two of rheumatism ; one of hypocondria ; one of ear-ach ; one of cough ; one of scald ; two of rupture ; five of contusion ; two of wound ; one of inflammation ; one of furuncle ; two of abscess ; and three of ulcer : 38 patients in all. I sent 12 men to the hospital, viz. one with belly-ach ; one with rheumatism ; two with cough ; one with scurvy ; one with abdominal obstruction ;

* It was in this gale that part of the French fleet under the command of De Grasse, taken by the great Rodney and Hood, were sunk on their passage coming to England. Some of our own old crazy ships were lost at the same time.

one with contusion ; two with rupture ; and three with ulcer. 11 patients remained in the sick list at the end of the month.

We failed the 1st, and returned to the same anchorage again on the 2d. We failed on the 4th. On the 17th we took a privateer, and brought her people on board of our own ship. We anchored in Portland Road the 19th, and arrived at Spithead the 20th, with three sick, and a few lame patients only in the list. The *Diligente* guardship at Spithead is very sickly ; and I am informed the *Flora* is also very sickly in the harbour, in consequence of bringing over new-raised men from Ireland. Eight of the nine fever patients which complained this month were admitted at the end of the month. They were infected, I believe, by one of our own men going on board the *Diligente* the 24th day of the month on liberty. A messmate of his was seized the 25th, and this man himself complained next day of fever ; and was affected with it on the 31st. This was another instance of the bad consequences of allowing the people to visit on board the sickly ships.

NOVEMBER.

Sixty-nine patients complained this month ; viz. twenty-seven of fever ; two of pleuritis ; one of parotis ; three of head-ach ; two of rheumatism ; one of ophthalmia ; one of aphthæ ; one of erysipelas ;

sipelas; two of eruption; four of cough; one of diarrhœa; two of scald; ten of contusion; one of dislocation; five of wound; three of inflammation; one of furuncle; and two of abscess.

Ten of the fever patients were sent to the hospital on the 5th, as we were to sail the next day. We had thirteen patients in the list at the end of the month.

On the 6th we sailed, and anchored at St. Helen's. The 7th we sailed, and anchored the 27th at Torbay. We sailed again on the 30th.

Retching was a very urgent and debilitating symptom among the fever patients; and it seemed to have proceeded from tartar emetic having been given as the emetic, without proper caution, unknown to me.

But general debility and cough were the symptoms mostly complained of by the patients. After the tartar emetic was laid aside, and ipecacuan was administered as the emetic, retching was no more complained of. Neither the pulse nor tongue were much altered from their natural state; notwithstanding the infection was so virulent as to affect the sentinels over the sick.

More of the men who had lately come on board, (especially of those that came from the Lightning fire-ship, which I am informed was in a sickly state), than of the old standards of the ship, were affected with fever.

Pains about the thorax were very frequent, and violent symptoms amongst the sick. A few of the patients who were so affected had a little blood taken away, without being at all relieved. But a few men who had the vena saphena opened, thought they received benefit from it. But this perhaps was more owing to the pediluvium which was previously made use of to raise the vein, than from the quantity of blood they lost. The pediluvium had not been so generally made use of in the other cases as I had directed. On the 10th, one complained of parotis, which most probably proceeded from the infection. This patient escaped the fever; but he afterwards was affected with slight erysipelatous symptoms. All the sentinels which attended the sick were seized with fever.

After the ipecacuan vomit, I opened the body gently, and prescribed the bark immediately after, with such other medicines as from time to time I saw proper. I also blistered early, and allowed the patients wine. By which means, thank God, they all did well.

My bark, owing to what cause I do not now recollect, was so bad, that I was obliged to administer it in double doses. If a similar circumstance to this had occurred to practitioners who happened to be prejudiced against the bark, they might have had their prejudices confirmed. And they would have
at

at least condemned it as being entirely ineffectual. The pleuritic * patient was treated with bark in the same manner as the fever patients, and recovered. Five of the men who belonged to the privateer which we took on the 17th ult. entered for the ship, and were all seized with fever. Two of her people who were sick, and the surgeon, were immediately sent back to the privateer. Query—Did this privateer's sickly people occasion the fever on board of our ship? There seems to be no room left to doubt it.

DECEMBER.

Nine men complained of fever; two of pleuritis; two of head-ach; one of indigestion; four of rheumatism; one of apoplexy; five of scald; one of strain; five of contusion; five of wound; two of inflammation; one of abscess; and four of ulcer. Forty-two patients in all. I sent one man for cough to the hospital on the 4th. He was sent there the 21st Oct. for L. V. and while we were at sea, was discharged on board the *Diligente*. When he came on board he was much in the same state as when he was sent on shore. Sixteen remained on cure at the end of the month.

We arrived at Spithead on the 2d; we sailed the

* This was not pleuritis vera, as the learned reader will allow: nor pleuritis rotunda: but muscular or spasmodic affection only.

6th ; and returned again on the 20th. About the 21st, the Commodore's pendant was struck ; and on the 31st I left the ship.

Captain Lewes was very attentive to the cleanliness of the ship, and of the men ; and readily concurred in every thing which I proposed, either to prevent or to remove the sickness. His orders to the lieutenants were peremptory to that purpose, and were most readily and punctually complied with. I had the sick berth frequently paid with oil of tar, which I purchased for that purpose ; and I had the carlines between decks paid with it several times. The smell of this fluid is far more agreeable than vinegar, both to the sick, and to healthy people. But fresh slacked lime laid on with size, is far more efficacious in correcting or resisting infection—only that the smell of it is extremely offensive.

The 31st, I was discharged from the Romney.

CHAPTER II.

Remarks on the Monthly Review and Table.

I HAVE already been so full in my remarks on the Monthly Review of the Sick ; and upon the Pathological Table representing the state of the sick on board of the Edgar, that I have left nothing to add concerning those of the Romney. The number of contused cases on board of the latter, is a further strong and impressive testimony of the weight which my argument, for the severe punishment of drunkenness, ought to have with captains and commanding officers of the navy. But if the method—severe punishment—which I recommend to prevent drunkenness, be thought cruel or tyrannical, I am ready to acquiesce in changing it for a punishment of less severity, provided the other which is substituted in its place is of equal efficacy. But I contend, on the principles of humanity and policy, that the *vice* is productive of such alarming consequences, that any punishment whatever can hardly be considered, either morally or politically speaking, too severe to suppress such flagitiousness—flagitiousness which merits and calls aloud for the interposition and aid of civil as well as of martial law.

The ten fever patients were sent to the hospital, because we were going to sea the next day, and upon such service as might bring us to engage the enemy the same night; it would therefore have been as imprudent as it would have been inconvenient to keep them on board.

Six patients were sent on shore with the measles, to prevent the infection from spreading in the ship; and the other patient was sent in a convalescent state for the benefit of milk diet and exercise.

The treatment of morbilli or measles is so generally known to be antiphlogistic, that it would be needless to dwell on the subject.

As I have already observed, perhaps the head-ach patients, and many of those with cough, might be classed with the fever patients, as they were treated at first nearly after the same manner, and recovered.

Before any liberty men are allowed to visit on board of ships, at any time, and more particularly in time of war, the strictest inquiry ought to be made by the captains and officers of both ships, whether or not the ships' companies are healthy. This precaution is equally incumbent on the officers of both ships; and they are equally interested in carefully attending to it; as the public service renders it an object of mutual concern and care, that *a man should neither be sent to, nor received on board of any ship or ships, if there be any men ill of fever on board of either*—let it be ever so slight.

It

It is equally remarkable that no petechiæ appeared amongst the fever patients on board the Romney, though the infection was extremely virulent. I see no other way of accounting for this, but in the way I have already mentioned, viz. The method of managing the sick.

CHAPTER III.

*Symptoms of Fever which were not observed on Board
of the Juno, nor on Board the Edgar.*

IN some cases sooner, and in others later, of the fever patients on board the Romney, the eyes were so much affected, that they could not bear to look at the light.

Heat in the eyes was much complained of.

The pulse was at times slower, as well as weaker than in health.

In some cases, the pulse was not discernibly altered from its natural state.

The appetite of some patients was immoderate; and of others the craving was inordinate.

CHAPTER IV.

The Case which terminated fatally.

JAMES MOORE, a marine, aged about 25, who had lately been long ailing in America, complained the 7th of July of the general symptoms of fever; but more particularly of languor and debility. After the operations of vomiting and purging gently, he took the bark until the 23d, which was the 17th day of his illness; without its being mentioned how often the dose was repeated. But I now ordered it to be given him four times a day, though he was much better.

On the 18th, he was recovering, and continued to take four doses of his bark.

The 19th, he continued to recover.

On the 20th, he had no appetite, nor did he appear to have gained any strength. He was ordered five grains of ipecacuan in the morning; took his four doses of bark in the day; and an anodyne at night.

The 21st, he was much the same; he only took the ipecacuan to-day through neglect. The elixir of vitriol was added to his bark to-day; and no other alteration was made in his medicine.

22d. No alteration was observed about him ; and he took his medicines.

23d. He said his eye-sight failed him on getting up, through debility, and the pulse was smaller and quicker than natural. I ordered his medicines to be continued ; with wine occasionally ; and a blister to be applied between the shoulders ; as a stimulant.

24th. The blister prevented his sleeping, but his pulse was firmer. I prescribed for him as before.

25th. Though he recovered slowly, he was evidently better. No alteration was made of his medicines. In the afternoon he complained of dyspnoea from immoderate eating.

26th. He was on recovery. Instead of the elixir of vitriol I gave him lemon juice.

27th. He passed a restless night ; his countenance was flushed ; and his eyes were lifeless. The ipecacuan powder was repeated, and he took his other medicines.

On the 28th a remission was observed without vomiting. He took each dose of his bark in three spoonfuls of the decoction of snake-root ; and one-eighth part of a grain of tartar emetic with it occasionally. His wine was continued.

29th. He rested ill from inquietude and starting out of slumbers. I made no alteration of his medicine.

30th. He thought himself better ; but the pulse was quicker than natural. He went on with his medicines.

31st. His sleep last night was disturbed with idle dreams. The tartar emetic was omitted, and ten grains of colomba in powder was prescribed four times.

32d. When he was asked, how he did? he always replied he was better; he dozed, and the countenance was flushed. The medicines and wine were prescribed as yesterday.

33d. A motion about the mouth, as if tasting something, and when he coughed he spat up a small contracted froth. I repeated his medicines, and ordered blisters to be applied to the internal parts of his thighs; and with his wine I gave him imperial for his common drink.

34th. Tremours were observed; and he complained of cough, with pain in the right breast. Besides repeating his medicines, I ordered him every five hours ten grains of salt of amber, and thirty drops of the volatile aromatic spirit.

35th. He appeared, and also thought himself better. No alteration whatever was made in the medicines; only that I tried another quantity of bark which I had.

36th. He complained that his mouth was incessantly dry; the cheeks were livid, and he muttered deliriously, while the tremours were also increasing. I repeated his medicines; and applied blisters to the internal parts of his arms.

On the 37th, his countenance was wild and squalid; and appeared to be covered with greasy sweat;
the

the muttering still continuing. I omitted his medicines, and gave him wine only.

38th. He died.

Query. Did the immoderate eating bring on the relapse? Were any of the thoracic or abdominal viscera particularly affected, for the bowels were kept regularly open? If any, which of them? Had bark and wine been prescribed liberally in the beginning of his illness, I am of opinion he would have recovered; and, that the bark had not fair play. I scarcely saw him for some time after he was taken ill.

I shall defer what I have further to add on the treatment of fever to the Third Volume.

CHAPTER. V.

COMPARATIVE TABLE.

Shows the Number of Fever Patients on Board of the Romney, between the 8th May and the 31st of December 1782; and the Number and Proportion of Deaths.

Fever Patients.	Deaths and the Proportion of Deaths.
75	1—which is $\frac{1}{75}$

PART IV.

OBSERVATIONS ON DISEASES, ON BOARD THE
 BLENHEIM, FROM JANUARY 1, TO APRIL 7,
 1783.

Proemial Discourse.

HAVING left the Romney yesterday, and made my appearance on board the Blenheim at Spithead immediately, I proceed without any preface to lay before the reader the state of the Sick List, from the 1st of January until the seventh of April 1783, when that ship was paid off.

The Blenheim was a second rate, carrying Commodore Elliot's broad pendant, and was commanded by Captain Lewes. A squadron of ships that was ordered out to the West Indies was put under the command of the Commodore. We did sail from St. Helens, and were recalled before we got out of the Channel; as will be noticed hereafter.

The Blenheim's complement of men was 767, besides supernumeraries; amounting in all to about 800 men on board—many of them raw, green men,
 just

just imported from Ireland in crouded ships and tenders; and were in the most filthy ragged condition that I ever saw men. The natural consequence of which was, that being infected with ship fever, they brought it on board the Blenheim, as will appear in the sequel.

CHAPTER I.

*Monthly Review of the Blenheim's Sick List, from
the 1st January to the 7th April, 1783.*

JANUARY.

ONE hundred and thirteen men complained of fever; seven of pleuritis; three of quinsy; one of ophthalmia; two of rheumatism; seven of cough; two of consumption; two of scurvy; two of asthma; two of eruption; one of deafness; one of hæmorrhoids; one of itch; one of scald; one of strain; fourteen of contusion; two of dislocation; two of excoriation; two of inflammation; two of furuncle; one of chilblains; three of abscess; twelve of ulcer; and one of cancer:—one hundred and eighty-five patients in all.

Nineteen men were sent to the hospital as we were on the point of sailing on foreign service; viz. eleven for fever; one for consumption; one for cancer; and six for ulcer; and the other consumptive patient died. The fever patients were only stilled so, to get them received into the hospital; they were picked out as bad, and very dirty men.

Commodore Elliot's broad pendant was hoisted on board, and the ship was commanded by Captain Thomas Lewes. The ship's complement, including the Commodore and his retinue, amounted to 767;
besides

besides about 50 supernumeraries, who were raw and green new-raised men from Ireland; and, as always is the case with new-raised men, they were exceedingly dirty and very slothful.

On the 16th, we sailed, and anchored at St. Helens.

On the 17th, we sailed in the afternoon with the *Triumph*, *Goliah*, *Pegase*, *Cambridge*, line of battle ships; the *Profelyte* frigate; and *Vesuvius* fire-ship. In all seven sail.

The 19th, we returned to St. Helens with the squadron in company; in obedience to orders sent out after us to the Commodore by express.

FEBRUARY.

Only thirty-five men complained of fever this month, which was a prodigious decrease of fever patients; one complained of measles; four of ophthalmia; two of rheumatism; three of cough; one of asthma; two of eruption; one of belly-ach; one of itch; one of mania; one of scald; seven of contusion; two of wound; two of inflammation; two of abscess; and fifteen of ulcer: eighty patients in all: five of whom were sent to the hospital; one for fever; one for consumption; and three for ulcer.

The 6th, we sailed and anchored again at Spit-head.

On

On the 7th, the Commodore struck his flag, and went on shore.

The 28th, the marines were landed.

MARCH.

In the beginning of the month the ship was ordered, and we sailed round, to Plymouth to be paid off. The men were immediately employed on our arrival at Plymouth in unrigging and dismantling the ship for being paid off, and I am sorry to say soon began, as they had done on board of many of the ships before we left Spithead, to show a mutinous disposition. Notwithstanding all the uncommon care which Captain Lewes and his officers, particularly the First Lieutenant, that very active and excellent officer, Mr., now Captain, John Laugharne, took to prevent it. This disposition was supposed to be fanned, instead of being subdued, by the mistaken lenity and conduct of the then First Lord of the Admiralty.

Having got leave of absence from the ship on the 19th of the month, I left her the 20th; and the men were paid off the 7th of April.

Nine men complained.

CHAPTER II.

Remarks on the Review and Table.

IN removing from the Romney to the Blenheim, I left a healthy small fourth rate, to go on board of a sickly second rate, an exchange serious to officers in general, and more particularly to the Surgeon. In a ship thus ordered on foreign service, the officers will probably have time to discipline and exercise the men on the voyage, before they arrive at the place of their destination for active service. But the Surgeon is immediately involved not only in numerous and actual difficulties, but in the most imminent danger of his life. Such I found was my situation on board of the Blenheim; I got infected in the sick berth a few days after I went on board, and mentioned it to my first assistant at the time. However by using immediate precaution, very providentially I was not laid up.

The supernumeraries had been very lately brought over in crowded tenders from Ireland; and for the same reasons which I stated in October 1779, on board the Edgar, they could not possibly escape being infected. And they consequently carried the
infection

infection on board of every ship of the fleet to which they were sent. Were the expence and loss of men's lives on board of the different ships amongst which this supply of men was distributed to be accurately estimated, it would not be difficult to prove that it was of very little, if of any, benefit to the service or the country at large. I have little doubt in my own mind but it was a national hurt ; because the men being soon after paid off, before the infection was destroyed, it was dispersed throughout the whole kingdom ; and wherever fever appeared, which was almost universally in Great Britain, in the summer and autumn, it was every where denominated by the name that Surgeons, Apothecaries, or Physicians fancied, without their ever suspecting its source of infection. So that every name of fever expressed in the nosology was applied to it. What contributed greatly to the general malady was, that, though Government had been at the expence of providing transports to carry these volunteers back to Ireland, when they were paid off from their different ships, vast numbers of them would not go home, but chose rather to wander through the country, by which means they carried disease with them wherever they went.

The uncommon attention which Captain Lewes, and the First Lieutenant Mr. John Laugharne, immediately under his direction and support, paid to

the cleanliness and discipline of the men and of the ship, will ever highly redound to their honour. Every thing which I proposed for the recovery of the sick ; and for stopping the progress of infection, was immediately complied with. This meritorious attention of theirs, and the Commodore's benevolence to the sick, assisted and supported me under such an arduous task. A task which I considered as one of the most trying, either for my own personal safety, or medical experience, that could have occurred. That I had run a prodigious risk of my own life, I have already mentioned ; and the time was come when the most urgent necessity demanded a clear and unequivocal testimony of the validity of my asseveration concerning the success of my management of ship fever. I was now either to establish on a solid and lasting basis the successful treatment of ship fever ; or to have what I had said concerning it rendered a subject of derision and contempt for ever ; and to have it classed with the erroneous doctrines of former writers, two or three of them only excepted. I thank God, however, I succeeded in having established, beyond the power of theory or sophistry to invalidate, the validity and veracity of my opinion and treatment of ship fever.

If I was asked by what sensation I knew that there was infection floating in the air within the sick berth ; and in what manner I was infected? I
should

should answer, that the former, though very perceptible to my sense of smelling, was very difficult for me to describe. But the idea impressed on my olfactory organ in the sick berth on board the *Blenheim*, was that of entering into a confined place where old wet rags or clothes beginning to heat were lying. The manner in which I was infected was by inspiration; or, by inhaling the morbid effluvia into the lungs, I have no doubt.

I must however observe, that though I have been often infected by attending the sick, I never was struck at the moment of being infected, with the same impression or idea of the morbid effluvia, twice alike. Sometimes I have had reason to think it was halitus from the patient's breath; sometimes the exhalation from the body; sometimes from the perspiration; and all these differing at different times. But I have been always of opinion, that there was less danger to the practitioner in touching a part of the patient's body where there is no sore, with the hand or the fingers having no sores on them, than there is in inhaling into the lungs the air about the patient, which is loaded with morbid effluvia.

But as soon as possible after I felt myself infected on board the *Blenheim*, I took an emetic, and after the operation, bark and a little wine.

In the same manner my fever patients were vomited when they complained; the bark was given

them an hour after the operation; and the pediluvium was used at night. Sudorifics and aperients, or other medicines, were joined along with the bark, according to circumstances; by which likewise the dose and its repetition were regulated. But not a man was let blood, nor debilitated by evacuations. Numbers of the fever patients were afflicted at first with catarrhus symptoms, in which cases bark was not so early administered; but they were not debilitated by evacuations more than other fever patients: on the contrary, the most powerful stimulants were prescribed. From five to ten drops of the tincture of cantharides* in lintseed infusion were administered three or four times a day.

The success of this practice is so very evident from the favourable alteration in the sick list in February, that it would be needless to enlarge at present any further on the subject. Fires were kept up constantly in the sick berths in pots. These berths were under each side of the fore-castle; and were frequently paid with oil of tar, which was now supplied from the dock-yard. The lower and middle decks were also sometimes paid with it. Vinegar is by no means to be compared with it for correcting effluvia or smell.

Every thing else, which I could think of, was

* This tincture was four times stronger than the one in the Pharmacopœia.

put in practice from time to time to destroy the infection, and to keep the ship clean and healthy ; the bedding of both the healthy and sick was regularly aired ; and carefully kept apart.

Our squadron was very sickly, and buried a number of men while we were lying at St. Helens, particularly the *Triumph*.

The prevailing diseases on board those ships was fever : which arose from the same source as it did on board the *Blenheim*. But was managed in a very different manner.

CHAPTER IV.

COMPARATIVE TABLE.

Shows the Number of Fever Patients on Board of the Blenheim, between the 1st of January and the 7th of April 1783, and the Proportion of Deaths.

Number o Fever Patients.	Number of Deaths.
157	None Died.

The Reader may, if he pleases, deduct the thirteen patients that were sent to the hospitals, and 144 will remain.

Two of the thirteen sent to hospitals died.

PART V.

MEDICAL OBSERVATIONS, MORE PARTICULARLY
ON FEVER, BETWEEN THE 7TH OF APRIL
1783, AND THE END OF DECEMBER 1790, IN A
PART OF HAMPSHIRE.

Proemial Discourse.

I SHALL now lay before the reader, without interruption, an epitome of my medical observations; and particularly those on fever between the 7th of April 1783, and the end of December 1790, in a part of Hampshire bordering on the New Forest, where fever has been always considered endemial and fatal.

As prefatory to the subject, I shall mark the great outlines of the situation, that the reader may from thence form to himself some idea of the country. In following up this outline, I wish to show him the connection between the situation and the endemial complaints; without the least intention to state
parish

parish registers, which are kept only for the sake of knowing the increase and decrease of the population : Or to form comparisons between different places, as to which is the most healthy of them. The reader is not to expect, therefore, any flowery or pastoral history of the country ; but only the general appearances of it, I say, in order to show how far it may be supposed to have any influence on the health of the inhabitants.

Hythe, the small village in which the author resided*, is situated, nearly opposite Southampton, on the SW. side of that arm of the sea that runs up as high as Redbridge, which bears from Hythe about N. or N. by E. This arm is known by the name of Hampton-water, and commences at an old castle situated on a small neck or point of land which runs out from the SW. side of the water, making it much narrower at its entrance than it is in any other part, especially at high-water, which covers a great deal of marshy ground that is uncovered a considerable time before low-water, and after the tide begins to flow ; so that the navigable channel up to Southampton and Redbridge is narrow. A good deal of the marsh is banked in on the SW. side, and two considerable arms run up on the NE. side. The lower runs up by Hamble to Botley†, and the other runs up a little above Itching Ferry. On both these arms ships of war are built occasionally. But on

* Is increasing fast in size and population.

† River.

the SW. fide, there not being any arm running up, there is but one place, which is at Hythe, where small vessels are built.

Calshot Castle, as it is called, is about eight miles by land, and about six by water—bearing nearly SE. by S. from Hythe.

From the entrance of Hampton Water to Cowes, the nearest part of the Isle of Wight, is about four or five miles across the Channel which runs down to the Needles.

About four miles below the castle in the channel is the entrance or mouth of Beaulieu river, which runs up to the mill in the village. Beaulieu is about four miles from Hythe across the Forest, bearing about WNW. On Beaulieu arm or river is Bucklars-hard, where king's ships are frequently built.

To the southward of the line thus drawn across from Hythe to Beaulieu, lies the parish of Fawley and Exburgh—part of which is forest land; with several marshy pieces of ground difficult to be crossed in wet weather, in the winter especially. About Exburgh, Gilburgh, Cadland, and Ouburgh, there is a good deal of timber. At Gilburgh there is an old mansion of Colonel Mitford's; in a very confined situation, being nearly and very closely surrounded with timber, opposite to Bucklars-hard. Exburgh is between eight and nine miles from Hythe.

Eaglehurst is a fanciful building about seven miles from Hythe.

Cadland

Cadland, *now* the seat of Andrew Drummond, Esq. is the only considerable mansion in the place, about four miles from Hythe. It is modern, well-built, elegant, though plain both without and within. A more comfortable house, fitted with every convenience that is needful both within and without, is not to be met with ; and there is plenty of timber about it ; an elegant pleasure ground ; out-houses ; and about four acres of garden ground are adjoining. The farm-yard is altogether so uncommonly handsome, that it is visited by many strangers. The house stands very high, commanding an extensive prospect of Spithead, St. Helens, and the neighbouring country and forest around it: Besides,

There are several handsome cottages belonging to Mr. Drummond, in the neighbourhood ; and a neat place belonging to Mr. Tate on Langdown, which is a little way from Hythe, on the rising to the SSW. of it. Across this down the high road goes to Beaulieu, Lymington, Exburgh, Gilburgh, Leap, Stone, Eaglehurst, Fawley and Cadland, &c. from Hythe.

To the northward of the line from Hythe to Beaulieu, lies the New Forest, Lyndhurst, Redbridge, Totten, Ealing, and parish of Dibden. This village is about two miles from Hythe, and on the estate is a good deal of timber. It is higher up Hampton-water, and bears about N. by W. of Hythe.

Southampton bears from Hythe about NNE.
and

and distant full three miles. The tide flows close up to Hythe, and runs into the village at spring tides. And at low-water, *then*, a very extensive marshy ground is left uncovered. It is exposed to the winds from N. round by E, to SE. by S. The finell from the sea-marshes with these winds is very unpleasant in Hythe; but it is well defended from the winds between SSW. and NNW. In the summer many of the land marshes or swampy grounds are quite dry; but are unpassable in the winter. Some of the roads are very deep then. Good water is very scarce in Hythe. There is great variety in the face of the country round Hythe. It abounds in numbers of hills, valleys, and champaign spots, which are covered with a great variety of herbs, shrubs, and trees. Of the former, fern; of the shrubs, furze; and of the latter, oak, are most abundant. The champaign parts are chiefly between the SW. and W. The soil in general is thin and light, covering either gravel, sand, or whitish clay; besides, in the forest marshes there is a black peat soil. In dry weather, water is scarce every where about Hythe.

The country is yet but thinly inhabited, for, excepting in a very few villages, Beaulieu, Fawley, Hardley, Langly, and Dibden, two houses are seldom to be met with together. There is little connection with Lymington, Marshwood, Ealing, Totten, and Lyndhurst.

Dibden

Dibden, the nearest village to Hythe, consists only of a few scattered houses and detached farms, forming a very small parish, though Marshwood partly belongs to it, I believe. From the parsonage, which is situated on an eminence, there is a fine prospect of Southampton, the country round it, and the Arm, or Hampton water. Marshwood, lying still higher up the water, is low in situation, and very wet in the winter; and forms a very straggling village. This village is partly in the parish of Eling and is two miles higher up, nearer to Red-ridge, and parted from Totten, near the head of the water on the same side, by a small inlet to the tide, whereon is a large corn-mill.

The nearest village to Hythe on the South, in the road to Cadland, Fawley, &c. is Hardley, about half way to Fawley. A village, though lying high to what Hythe does, has formerly been so sickly as to give name to a fever there, known by the appellation of the Fawley ague, or *cold chills and fever*. This fever generally assumes the remittent type: An intermittent or ague very seldom occurring in that country, and the fever seldom happens there.

Beaulieu is partly in a bottom, and partly on either ascent from the arm which runs up through it; and at low water leaves a large extent of muddy marsh on both sides. At the entrance of the Arm, or river, from the sea, on the NE. side, is Leap, a scattering village, with a fresh as well as salt water marsh,
close

close to some of the houses. This village is between eight and nine miles from Hythe.

Somewhat nearer to Hythe, on the same side of the river, lies Exbury, another very scattering village, surrounded with wood, chiefly oak; and Gildbury is closely adjoining, where the Lord of the Manor, Colonel Mitford's mansion, is situated. Near to which is a small chapel of ease; a few detached farm-houses, and some cottages here and there. The situation of the mansion is extremely rural and pleasant in the summer, though it commands only a circumscribed view of Bucklars-hard and the Isle of Wight. The only other place deserving the name of village near us is Langly, lying between Leap and Hythe, six miles inland from Hythe.

I should have remarked further respecting Cadland, that the house stands high on a dry gravel foundation, in a large park, about half a mile from the nearest part of the sea at high water, and from the sea marsh at low water. But a great part of the marsh has been banked up from the sea, between Cadland and Calshot Castle, and makes a very extensive rich meadow. There are several salt works on the marsh. Cadland park is large, and diversified with woods and lawns. To the NE. of the house is a pretty large pond with an engine on it to supply the house with water, and it is also supplied with spring water. The situation of Cadland appears healthy and pleasant. In eight years no case of fever occurred in the house.

It

In Hythe, notwithstanding its low situation, close to a sea mud marsh at low water, I did not meet with many fever cases. In Dibden I met with infection in two houses, a pauper's, and a sawyer's as virulent as I ever observed in a ship or hospital. The pauper's whole family, consisting of himself, his wife, and six children, were infected. The oldest, a girl, died. They got the infection from their neighbour the sawyer, who had it brought into his family by his wife going to see her mother and sister that were ill and dying of fever at Beau-lieu. The pauper's wife's mother, who lived at Marshwood, by coming to see her daughter's family, caught the fever and died. Several of the rest of the pauper's family narrowly escaped, with their lives. All the sawyer's family were infected, except the wife. One child, who was too young to be prevailed on to take medicine, died. Of fourteen who I could learn had this fever, five died.

But this was accidental sickness, and not endemic; for when fever occurs, and is properly managed at first, it seldom acquires such virulence any where; and the nearer the situation is to marshes or undrained swamps, the more violent the fever is, and the patients recover health with more difficulty.

In every part of the country, I have met with bad cases of fever. In Minstead, about two miles higher up in the forest than Lyndhurst, I visited a farmer who had been infected at the work-house by a
pauper

pauper and his family, who were sent home to their own parish from one in Somerset, very ill of fever. Some of them were in filthy rags, and some of them were almost naked. The overseers of the poor in Minstead, not being able to prevail on any person to look after them, were obliged to do it themselves; and my patient being one of the overseers of the poor in the parish, and a humane man, was infected: as were many of the inhabitants from going out of curiosity to see these poor creatures when they first came, and a considerable number of such visitors were infected by them and died; but my patient happily recovered. The pauper himself died.

The diet of the lower class of people here, is neither adapted to preserve health, nor to recover it when lost by sickness or otherwise. It consists of a scanty proportion of bread, potatoes, cheese and bacon, with few vegetables and a little milk in the summer. Their drink is chiefly water. Sometimes they have a little small beer, but more frequently a little spirit, which grows scarcer daily, and much dearer since smuggling was so well looked after. Probably fever among the poor inhabitants formerly, was often occasioned by the immoderate use of spirits. Last year * apples were so plenty that they had a little poor cyder. Small beer would be more plenty amongst them, were it not for the high duty on malt. This

* In the year 1788.

class in general are extremely nasty in their houses, persons and apparel; their countenances are fallow and squalid; they are addicted to indolence, and their children are not only indulged, but are encouraged by the example of their parents in paying too little regard to the sabbath. Not but there are exceptions in all these respects.

Cold chills and fever, as the inhabitants express themselves, are common amongst children, even those on the breast. They treat this appearance of fever with great indifference, and suffer it to continue upon them for many months. Such children always have less or more obstruction, tumefaction, and hardness in their bowels: even some of the better sort of farmers will suffer this appearance of fever to hang about their children for many months, without calling in proper assistance; as they say there is no cure for it, and it will cure itself. This in general is not true; and it always lays a foundation for bad health; or a weakly constitution.

In this country there are numerous instances of longevity; and there are several in Hythe at this time.

CHAPTER I.

Observations on Fever, &c. in 1783.

THE summer was remarkably dry and hot ; and we seldom had any rain, and but light showers when it did rain, with a good deal of thunder and lightning. Our harvest began the 26th July. Christmas introduced the winter, and until then the weather in the fall of the year was generally uncommonly fine. Green peas were picked in Cadland garden in the middle of November.

When I arrived at Hythe, in the beginning of April, the small-pox prevailed in Fawley and Dibden parishes, in both of which Hythe is situated. I was informed they were at first epidemic in Southampton, and so unfavourable, that several had died even of inoculation. My patients, about fifty in number, all did well. I had great difficulty to save a young man who had the confluent small-pox. He was about eighteen years of age. He lived at Leap, and had been infected at Southampton, where he had gone to a fair and got drunk, I was told. I treated him from the beginning as a fever patient : it was the 1st of July when he complained to me.

Fever was the most prevailing disease until the 10th August, when rain brought the wind to the

N. and a sudden change of weather from very hot to cold, immediately introduced bilious affections, or bowel complaints, which were very general, but were chiefly mild, and easily carried off.

From the 23d April until the 31st December 1783, I had 67 fever patients under my care, of whom two died about the second day after I was called in, and neither of them took bark ; I found them so bad, that they scarcely took any thing whatever. One of the two that died was a woman, aged about 45, in Newtown, about three miles from Hythe ; and the other a sailor, belonging to a small coasting vessel in Leap, aged about 20 ; who had caught the fever at Portsmouth.

Thirty-four complained in the months of August, September and October, of fever, of both sexes, from the infant to old age. Five only complained in November, and none in December.

I have already * given my opinion of the cause why fever was so epidemic this year throughout the kingdom. Besides the communication between Hythe and Portsmouth is easy and daily. By which means infection was imported.

* Part IV. Chap. iii.

CHAPTER II.

Observations on Fever, &c. in 1784.

THE winter was very severe. The frost continued, and the snow lay on the ground much longer, as I was informed, than usual in this country. It fell with a gale of wind from the NE. and drifted exceedingly. The spring was rather cold and backward; but the hay harvest was very fine, and the summer pleasant. About the 18th August rain set in, after which there was scarce one dry day during the month. September was dry and pleasant until the 19th, when it rained, and there were showers for three days after; but upon the whole, the weather was fine until the 8th December, when a good deal of snow fell, and also on the day following. It also snowed on the 11th, 16th, 17th, 18th, and 21st. The wind between N. and NE. brought the snow, and it got to the Southward of E. about the 27th. It was a very cold month.

This year I had only 43 fever patients, of whom four died. One of them was a young man, aged about 22 years, who lived at Stone near Leap; and was ill three weeks before I saw him in February.

He took a good deal of bark ; but was too late in beginning with it to render it successful.

Another was a boy between seven and eight years of age, at Beaulieu, who was ill some time before I saw him in March, and would not take medicines regularly.

The third was a man aged about 34, at Gilbury, who was speechless—being in a violent paroxysm—when I was called in. In a short time, however, a perfect remission was obtained by means of the medicine which I saw administered myself. But notwithstanding he had been so extremely ill, and my having given the most particular directions to repeat the medicine during the remission, it was entirely neglected. So that the favourable opportunity to recover him was lost, and he died of the next paroxysm. The other patient was a woman, whom I only saw twice during her illness, in the end of December. She died in the beginning of January 1785, and had been four or five days ill before I was called in to see her. She was an aged woman, much debilitated ; and she took very little nourishment or medicine.

Bowel complaints in the autumn were extremely epidemic, and fatal in many places. Belly-ach, or more properly speaking enteritis, appeared about the end of September, and continued to rage with violence until after the frost set in some time. But providentially no patient whom I attended died. In the management of it the antiphlogistic plan was rigidly

rigidly followed up. Several patients were let blood so often as fourteen times before they recovered: they were always relieved during the operation. The femicupium also relieved immediately in every case in which it was used. After repeated evacuations, opiates were administered with great benefit to the sick. One patient was recovered beyond expectation by extr. hyoscyam. gr. i—ij. repeated every six hours. The purgatives which I made use of were chiefly ol. ricin. manna and neutral salts. The blood taken from these enteritic patients during the hard frost, and placed in a cold room without fire, never assumed the inflammatory crust or buff, though it flowed in a stream from the patient.

Fever, as I believe it ever has done, and will do in all ages, assumed appearances according to the constitution of, and circumstances about the patients; accompanied with acute rheumatic pains in some cases, which an unwary practitioner might have taken for pleuritis, or what writers term *causis*. In other cases it was attended with bilious or icteric symptoms. About some patients there were obvious marks of great debility; but in all of them the bark, joined with aperients when necessary, performed the cure.

In June and October, fifteen of the 43 fever patients complained, and none of them complained in December.

CHAPTER III.

Observations on Fever, &c. in 1785.

SECTION. III.

Observations on Fever.

THIS was the longest winter I remember ; and it was also severe. A great deal of snow fell, and it lay on the ground much longer than usual in this country. The spring was very cold and backward, the frost continuing until the beginning of April, and then we had white frost almost every morning of the month ; and frequently in May. Until the 9th June, the thermometer was not higher than 53.

June was dry, a few days in the beginning of the month excepted, when light showers fell. But we had very little rain until the middle of July, after which we had rain ten days successively. It continued wet, and was very cold the greatest part of August ; notwithstanding which many got in their harvest before the end of the month.

The beginning of September was also very cold and wet. The latter end of October and beginning of November were rainy ; and frost set in the 7th, which continued ten days. Rain fell again in the
end

end of the month. The wet weather continued until 21st December, when frost again set in, and snow fell the 25th.

After so long and severe a winter ; after so cold and backward a spring ; and after such a wet unreasonable summer, that much sickness should follow is not to be wondered at. March, July, October, and November were particularly unhealthy. Thirty-eight of the sixty fever patients who came under my care this year, having complained in these months. Seven of the 60 patients died ; besides the elderly woman who complained last December, already made mention of. Two of the seven died in March. One of them was an old and very infirm blind man, worn out by repeated attacks of fever from improper living, at New-Farm, near to Leap. The other was a child in Fawley. Of this case I foretold the fatal event at my first seeing the child. The old man was too late in beginning to take medicine ; and the child would not take any.

One patient, a woman, died in September at Leap, who obstinately refused taking medicines. This woman's husband was ill of fever at the same time, and recovered with much difficulty. Both of them were very obstinate, after being too long ill before they called me in.

Two children were affected with fever, and died in October at Dibden, as I have already mentioned. They took very little medicine.

One

One woman died in November; she lived close to a large marsh, and was ill long before I saw her. This woman's case was chronic and cachexia, rather than fever.

The seventh case was that of a young woman in Beaulieu parish, which happened in December. She died of putrid fore throat. She was ill five days before I was called in. The bark or tonic treatment had no trial in these seven cases.

The fever began with, and continued throughout the year. In numerous bad cases I was informed it proved fatal in many places. But I did not find that it resisted my usual method of treatment, when I was called in early, and the patients followed directions. Most of these cases were accompanied with bilious obstructions, or suffusion; and icteric symptoms. Aperients were therefore necessarily joined with bark.

In convalescent cases of fever, I have often observed that, after the fever and its concomitant symptoms were entirely carried off; great acceleration of the pulse, and restless nights have again returned; accompanied with the loss of appetite, and much anxiety. All these symptoms however, being the effects of debility only, disappeared as the patients regained strength, by the assistance of frequent change of apparel and air, nourishing diet, wine, anodynes, moderate exercise and amusement.

* Here the author speaks in compliance with custom.

Some

Some of my readers will be greatly disappointed in not meeting here with a particular description of the endemial fever of this country. But for what I have further to add to the descriptions already laid before them, both in this and the former volume, I refer them to the Third Volume, where I shall be copious on the important subject of fever.

Enteritis appeared so early as July ; was extremely epidemic, and fatal in several cases in the country, and in Southampton, as I was informed ; though fortunately I did not lose a patient. Numbers who had it last year suffered greatly from it this year ; but the same method of treatment which succeeded before, was equally successful now. I was informed, it deserves notice, that enteritis was not known to be epidemic in this country before last year. Chronic, hepatic affection is the most prevalent endemic of that country ; amongst the poor, owing to the water and their diet.

SECTION II.

Observations on Bites of Mad Dogs.

I HAD two patients, both boys, this summer, that were bitten by mad dogs *.

* One of the dogs died mad. The other dog, which was bitten by the mad dog, was shot after signs of his being mad appeared about him.

In

In relating their cases I hope to be excused for being particular, because the subject, though very important, is involved in mystery or perplexity and doubt—particularly as to the possibility of canine madness admitting of a cure.

After stating both cases, I shall add some Remarks on the subject, and leave the reader to judge for himself.

One of the boys, William Titcher, was aged thirteen, and lived at Ouburgh, with a respectable farmer, named Etheridge. The boy being in the farm yard; when a strange dog passing—whether with or without provocation by the boy, I know not—but he attacked and bit, or rather tore him in both his legs on the 10th of April. The dog,—after having bitten a number of dogs, and some hogs, all of which either died, or were destroyed—died mad.

I was not sent for to see the boy until the 13th, which was the fourth day after the accident. He was now sent home to his father, a pauper, living between Fawley and Badminton.

During the three days that he staid at his master's after the accident, his legs were dressed by his mistress, a very respectable and sagacious matron, with poultices made of oatmeal and grounds of beer.

The lacerated wounds, large and small, in both legs, were fifteen in number; were very foul, livid, and

and almost destitute of pain, as well as of common sensation. Both legs were also much swelled.

I dressed the wounds regularly twice a-day, with Barton's Ormkirk medicine, for 22 days, one afternoon excepted; and once every day after, until they were healed, excepting one day. June 1st, he was so well, that I did not dress him afterwards.

On the 13th, 17th, 21st, 29th, and 30th April, I gave him a dose of Barton's Ormkirk medicine. It was repeated the 30th, because he wasted part of his dose the day before. On the 30th, p. m. he had a stool from his medicine, which was the only time it had any obvious effect, except profuse perspiration of his feet. This was observed by his mother-in-law during the cure; and could only be attributed to the medicine. This circumstance having never been known to happen to him before. On the 13th April, the pulse was 86, and gradually diminished in frequency to its natural standard. The wound looked obviously better after every dose of the medicine which he took.

On the 17th, the wounds, which were four in number, in the right leg, became bloody and inflamed, in the morning after appearing to be disposed to bleed the preceding day from the slightest touch.

The

The 22d, I observed he drivelled; which, his mother-in-law said, he very commonly did. But again remarked that she had never observed his feet to sweat before. No other occurrence happened worthy notice during the cure.

This boy lived with me afterwards from 1st June to the 11th October, as a servant, and never showed any symptoms of illness. I took him because every body was afraid to hire him, lest he should become mad.

The other boy was William Reeves, son of one of Mr. Drummond's servants, aged about 10. He was bitten the 31st May, by a large dog, that had fought with the mad dog, and afterwards was shot, having shown signs of madness. William Reeves and his brother were accustomed to play with the dog which bit him, as they went to school; and they told me that he had never been surly to them before. The boy was bitten in his right arm. On examination I found a small wound in the anterior part of the fore-arm, and a slight scratch on the anterior part of the arm, above the joint of the elbow. Both wounds seemed to have been parts of one bite. The arm, especially about the joint, was much inflamed when I first saw him on the 2d June. He complained of great pain, especially about the tendinous expansion of the biceps, and said he had passed a very restless night from the pain. He had a smart
fever

fever on him; and told me that as he went to school after he was bitten, a person, to whom he shewed the bite, officiously poured something on the wounds *to take the anguish out, as he persuaded the child*; which I afterwards learned was oil of turpentine.

In the morning I dressed his arm with Hill and Berry's Ormskirk medicine, and immediately after gave him a dose of their powder, which he instantly vomited; the pulse then beating 98 in a minute. I therefore repeated the dose in the afternoon, though the fever still continued. The 3d June, after he had passed a much better night, I found him easy, and that a little suppuration had taken place about the wounds. But he still had a little fever.

4th. He was free of fever, and the swelling and hardness of the arm were much less.

5th. I gave him a full dose of Hill's medicine again, and no unfavourable symptom ever appeared after. On the 6th he went to school in spite of his mother's directions, and never had any complaint. This boy lived with me afterwards; for the same reason that Titcher did.

FIRST REMARK.

I shall leave it to the reader to make his own observations on these two cases, which certainly merit his attention. They were both cured by medicines which, though apparently of a similar nature, are the property of rivals at great variance with each other; and, were I called to decide on their respective merits, I could not possibly give a preference to either*; their effects appearing to me to be so perfectly similar. Provided, therefore, that the medicine which is given be often enough repeated in sufficient doses, it is of no consequence which of them it is, in my opinion. But the repetition of the medicine ought to depend on the judgment of an experienced Physician or Surgeon; for the case must be extremely slight indeed, wherein I would depend upon one dose. In fact I would not depend on one dose in any case where a wound appeared to have been made.

SECOND REMARK.

If I had a patient bit about the trunk of the body, or head, by a dog that was mad, I would administer the first dose as early after the accident as I possibly could, and I would see the medicine repeated every day, until there were obvious symptoms of

* Having never analyzed them.

recovery.

recovery. Because, though the Ormskirk nor any other medicine, perhaps, may be able to conquer the disease when once the virus caninum is taken up into the absorbents, and the system becomes saturated therewith; yet that medicine, or others of a similar nature, may prove sufficient preventives when they are happily and liberally administered before absorption or infection is completed. This is certainly the case in other diseases which proceed from infectious aura; and particularly in fever. Even after the first symptoms of infection have shown themselves, by the immediate use of proper means before the general system becomes saturated with the virus, danger is not only prevented, but if fever should have taken place the symptoms are rendered mild.

THIRD REMARK.

The preceding cases merit the reader's serious attention for another important reason, viz. "Popular opinion or confidence in this or any other medicine, could not possibly have any influence on the minds of either of my young patients," whatever it might have on the minds of the parents; or on the practitioner who prescribed it.

I understand it was the opinion of a very eminent surgeon, that *the supposed efficacy of the Ormskirk medicine rested merely on the credulity, or opinion, of*

the vulgar; and had declared, *that the Ormskirk medicine never was of any service in a case of canine madness*, i. e. That it never performed a cure upon a patient who had been *bona fide* infected with canine virus; or with the poisonous bite of a mad dog. As the opinion of an eminent man on a subject of so great importance may lead to very serious consequences, I shall offer some remarks upon it, and let the reader decide for himself.

First, I must with all submission observe, that *opinion* is not demonstration. Therefore however respectable the person who delivers it may be—the *opinion* in itself is not nearer to fact, than *opinion* delivered by another person. Though greater deference may be due to the abilities of one person than to those of the other, still this concession does not alter the state of the *opinion*. And I hold it just, that the person assuming the negative *opinion* is as much under an obligation to prove the strength of his *negative*; as he is who assumes the *affirmative* opinion*. I have stated two cases wherein I gave and repeated the Ormskirk medicine more liberally than it is prescribed in the printed directions. The obvious consequence was, that neither of the boys showed after I left off visiting them *any symptom of canine madness*. The reason, according to the sceptic's *opinion*, was, that no virus was inserted in the

* To prove the affirmative.

wounds. Admitting the assertion, I desire him, however to prove it, or to disprove the well known facts which I have related, simply as they happened. *Opinion* is entirely out of the question.

As there are many facts placed beyond the power of man to demonstrate; so there are opinions, to invalidate, or confute which, no demonstration can be adduced. Whichever of the propositions one happens to adopt, he can set all proofs short of demonstration at defiance. *He will not believe.*

Faith in a medicine may sometimes do wonders, and even cure the patient, *I shall grant.* But so powerful an exercise of the mind in boys of thirteen and ten, as to produce such an effect as was produced in both by the Ormskirk medicine, I believe never happened.

If having given the Ormskirk medicine successfully, in the only two cases which ever came under my care, to two boys, on whose minds popular credulity or faith in any medicine, I say could have no influence—be no proof of the efficacy of the medicine; another practitioner, or the sceptic, having given it unsuccessfully to several patients, does not prove to me its want of efficacy. Because, were his cases fairly stated, I might possibly have great reason to disapprove of the management. He, perhaps, neither gave the medicine so early after the accidents; nor in such large doses; nor repeated them; nor treated the wound in such a manner as

to render it effectual ; and his consequent want of success affords good reason for my suspicion being better founded than his opinion is, who suspects no virus was inserted into my two boys' wounds.

The field for argument on this, like most other subjects of controversy, which are not reducible to demonstration, is boundless ; and, although I have no inclination nor leisure to dispute, I cannot suffer an opinion on this important subject to pass unnoticed, when, very contrary, I am persuaded, to the intention of its author, it might clash against the interest of mankind. In order, therefore, to elucidate the subject, let us for a moment try what assistance we can derive from analogy, and this I think is to be found in inoculation for the small-pox.

The benefit derived by mankind from inoculation, I believe universally allowed, is not from the incision, and the insertion of the variolous matter. It is derived from the use of proper means, both before inoculation and during the progress of absorption, to render the disease mild and benign ; and to put us on our guard should any untoward symptom occur. Which are certainly great advantages to the practitioner as well as to the patients : but,

The use of these means are never delayed by any prudent practitioner until absorption is known to have taken place : of which he cannot be certain for more or less time after the operation. In the
mean

mean time no pains are taken in inoculation to prevent absorption of the virus, as was in the cases of my young patients that were bitten by the mad dogs. Here my object was to prevent absorption *in toto*. But by inoculation it is only intended to regulate and mitigate the effects of the virus when communicated to the constitution, and allow it to proceed in its progress, and not to prevent it. Were similar means to be as speedily and liberally made use of to prevent the absorption of variolous matter after inoculation as I used with my boys—I believe it will be granted me very readily that few, if any, would have small-pox from the inoculation.

But it is ingeniously advanced by the sceptic, that when a person is bitten through his clothes, the virus is wiped off the dog's teeth on the clothes. Therefore that the medicine administered in such a case has had no malady to contend with. Again, when the mad dog has bitten a part that was uncovered, and no bad symptoms has followed the administration of the medicine, the sceptic denies the dog was mad. But should the case have proved unfavourable to himself; who has, owing to his want of faith in it, neither given the medicine so early, so liberally, nor so often as to render it effectual—not a word is mentioned of his practice; but the blame is laid on the disease being incurable, or on the inefficacy of medicine.

In the natural small-pox, and in febrile infection,

if proper means have been neglected before, or at the commencement of the disease, is not the loss of time irretrievable, and the consequence often fatal. Is it, therefore, unreasonable to expect the same to happen if we delay to administer effectual means of prevention immediately after the bite of a mad dog? And who can assert they will not succeed?

Besides, the proprietors of the Ormskirk medicine very properly recommend it to be given as soon after the accident happens as possible; though they adduce cases wherein it had been successful after symptoms of madness came on. The *doubts* of the most brilliant genius amount to no greater certainty or proof of his being right than of his being wrong. The modest and diffident philosopher is ready to admit that millions of facts exist which he cannot comprehend, and much less prove.

In a word, as there are as just grounds to suspect that infection may take place after the bite of a mad dog, as after inoculation; as the effects of both may be rendered innocent by the use of proper means timely administered; as the Ormskirk medicine is the most approved for the bite of a mad dog of any medicine we know; and as the success thereof chiefly depends on administering it early and liberally after the accident; there is no opinion existing which, I think, would justify me in delaying, a moment longer than I could possibly help, to administer it.

So many unfortunate people having been bit by
mad

mad dogs, and done well after taking the Ormskirk medicine, has deservedly placed it so high in the public faith as a cure for canine madness, that any attempt to destroy this faith, without communicating to mankind a more certain and effectual substitute for this medicine, is, in my humble opinion, neither philosophical nor humane.

Without any further discussion of the subject then, when such accidents happen, as did happen to these boys, it is no less our duty than prudent to use every means in our power to prevent the mischief which might otherwise follow. And on no account to suffer ourselves to be led away by scepticism, which may cause irremediable mischief without having the least chance of its doing good.

To cure canine madness in its last stage—hydrophobia, for instance—may set any medicine we know at defiance. But it does not follow that the disease in its infancy might not be cured, as well as small-pox or fever, with proper care.

CHAPTER IV.

Observations in Hampshire, continued.

SECTION I.

Observations on Fever in 1786.

HAVING resolved to go to sea in the Salisbury, of 50 guns, with my worthy friend Commodore Elliot, appointed to command in chief at Newfoundland, I was under the necessity to go from home, and leave my business several times before we sailed on the 18th of June. By which means I had but twelve fever patients under my care till that period.

One of the last December fever patients, a woman rather past middle age, who had suffered much by enteritis in the autumns of 1784 and 1785; and by repeated complaints in her stomach and bowels between these periods, died in January 1786. Unfortunately this poor woman became negligent of herself whenever she arrived at a convalescent state, and immediately brought on a relapse.

Another

Another woman died in March, the day after I was called to visit her. Upon seeing her I immediately foretold her death. She took no medicine.

After my return from Newfoundland, in November, I had two more fever patients within the year. I was informed, that bowel and bilious complaints had been common in the autumn and fall, both in Fawley and Dibden parishes; though these complaints had neither been so general nor violent, even among these people who had been afflicted with them in the preceding autumns, as they were in 1784 and 1785.

In the one fatal fever case of this year, the woman had not only been greatly debilitated by repeated attacks of illness, but had neglected to follow the directions given to her; and in the other case I had no time to do any thing.

SECTION II.

Observations on Fever in 1787.

BEFORE I sailed again on board of the Salisbury, for Newfoundland, about the middle of June, I had but twelve fever patients on shore, for the reasons

sons I have already mentioned; and only one fever patient more after we returned on the 18th November, until the end of the year. Most of these thirteen cases were very bad, and they had been so a considerable time before I was called in. On my return I was informed, that bowel complaints had been frequent in the autumn, especially among the people who had been afflicted with these complaints the three preceding years.

SECTION III.

Observations on the Fever in 1788, and continued in 1789.

UNTIL the end of June, when I sailed again on board the Salisbury, for Newfoundland, I had only ten fever patients, four of whom were very bad; one of them a lady, who had been ill nine weeks before, under another Physician's care, and relapsed the first day she went out to take an airing; to whom I was called in the next day. Both attacks of her illness commenced with violent pain and obstruction in her bowels. She soon recovered. From the 9th November, when we returned, until the

the end of the year, I had only three more fever patients, who recovered in a short time.

In the month of January 1789, I had six fever patients, five of whom were very ill, and one of them died, a woman, who I have been since informed lived intemperately. She was ill upwards of forty-eight hours before I saw her, and she died the seventh day of her illness. I only saw her three times, though she lived in Fawley. Her senses were more acute than when she was in health.

In February I had ten patients, one of whom, an elderly man, died the 8th day of his fever; but he had been ailing several days before. I did not see him until the 4th day, and but twice afterwards, though he lived in Newtown. At first he was over anxious to get well, and afterwards despaired without apparent reason. The appearance of his eyes were extremely morbid.

In March I had but two patients, both old people; and in April only six, of whom one died the 5th day of his illness, and I did not see him until the beginning of the fourth day, when I immediately predicted his death.

CHAPTER V.

SECTION I.

Observations on the Treatment of Fever Patients on Shore.

EXCEPTING in those cases accompanied with bowel complaints, bilious symptoms *, or rheumatic pains, wherein purging medicines were necessarily joined with the bark, I never deviated from my usual method of treatment. In one other case, that was accompanied with profound coma, in which I gave musk frequently in substance, as a stimulant, in doses of ten grains, besides the julap, but without any permanent effect, a remission was obtained, contrary to all expectation, except my own. But it was not improved by the attendants on the patient as they were instructed; and she died of the next paroxysm.

For the same reason that I declined entering fully into the description and management of the fever cases which occurred in 1783-4-5, I shall decline doing so now.

* I speak in compliance with custom.

SECTION II.

COMPARATIVE TABLE.

Shows the Number of my Fever Patients every Year, from the 7th April 1783, until the 30th April 1789, on Shore; the Number of Deaths; and the Proportion of Deaths.

Years.	Number of Fever Patients.	Deaths.	Proportion of Deaths.
1783	67	2	1—33 near.
1784	43	4	1—10 near.
1785	60	7	1—9 and upwards.
1786	12	2	1—6
1787	13		
1788	13		
1789	24	3	1—8
	232	18	1—14 nearly.

CHAPTER VI.

Remarks on the Observations on Shore, and on the preceding Table.

IF the event of my shore practice in fever, in Hampshire, had been the real criterion to have judged of the efficacy of my usual treatment of fever, there would have been very little to have said in its behalf, much less to boast of its success. But the reverse is the real fact; for it was by no means a fair criterion to judge by, as the reader may see in the two preceding Chapters; and from what follows. I have been extremely particular in my statement, for the public good, without having any self-interested motive, as will, I trust, evidently appear. Very little credit could possibly be derived from the success of my practice there, were I ever so solicitous for it, without a full explanation. But nothing ought to stand in competition with truth and the public good.

After what I have already said, it is almost needless to dwell longer on the cause of my shore practice having been so unsuccessful. But it discovers a circumstance highly important to the community. It shows in the clearest manner the irretrievable
loss

loss of time, by delaying to call in medical assistance early in cases of fever; and the great danger, I might safely have said the fatal consequence, of not complying with the directions of the medical practitioner after he is called in. Of the eighteen deaths, one patient only had a chance given her to recover; but her constitution was so worn out with repeated attacks of enteritis, for two years, as I have before mentioned, that medicine could not recover her shattered frame, though I was called in to her assistance the moment she was seized with her fever. This was the case of profound coma, wherein musk was given. Other stimuli were also administered in this case ineffectually, as well as the bark and wine.

Two more of the eighteen took bark; but they were so long ill before I was called in, that it had not by any means a fair trial.

In most of the other cases, it was idle to expect medicine to relieve them—they were so near the fatal period before I saw them.

One patient I thought might have recovered, though I did not see her until she had been ill several days, had she not been so obstinate as to refuse her medicine.

In a word, the unsuccessfulness of this practice originated from my not having been called in sooner, and the obstinate disposition of my patients; and when compared with the success of my practice on board

board of different ships, holds out, as I have before mentioned, a very melancholy and important lesson to the community—to call in medical assistance in fever, if they have any expectation or desire to profit thereby; and not to delay until the physician can do no more than witness the patient's death, or tell the relations that there are no hopes of recovery, which was too often my case.

I have always considered it as a vast advantage, which medical practitioners in public service enjoy, that they are consulted so early in fever; that they see their patients so often; and that they have authority over them and their attendants, more than practitioners in private practice have, generally speaking. Indeed the patients themselves and the empire share in the advantage; and it will be always found to correspond with and confirm what I have already said, that “the sooner patients apply for assistance; the sooner means are made use of; and the more liberally bark is administered in fever, the more efficacious will the practice be.”

CHAPTER VII.

*Observations on Fever on board his Majesty's Ship
Salisbury, in 1786.*

ON a voyage to Newfoundland in time of Peace, so little occurs worth mentioning, that to insert any Monthly Review would only be swelling the volume, and taking up the reader's time. Besides had our people been ever so sickly, both the usual occurrences of the voyage and the history of the island are so well known, that a meteorological review would have been unnecessary. For the same reasons I have declined to insert a review for the time the ship lay at Portsmouth between the voyages, while we were employed on that service; which was nearly seven months of the year. The remaining five months were partly spent in the passages out and home; and partly in the harbour of St. John's, without any material difference all the three voyages we were employed. Without further preface, therefore, I shall lay before the reader a succinct account of my observations which are chiefly confined to fever for the said voyages.

The ship was commissioned the 1st of March at Portsmouth; and but few cases of fever occurred

before our sailing on the 18th of June. Until we reached the Banks on the outward passage, few complained of fever. Not only more patients complained then of fever, but the measles also appeared; which I was afterwards informed is not uncommon. While the ship lay at St. John's, where we arrived the 19th of July, but few of our men were attacked with fever. On the 25th of October we sailed for England, and arrived at Spithead the 21st of November. We had likewise but very few fever patients on the passage home.

When we arrived at St. John's, and while we lay there, the sick were sent on shore to the hospital. The treatment of fever patients there, being immediately under my own direction, was exactly the same as on board.

From the 8th of March, the day of my appointment, until the 31st December, I had 31 fever patients, besides being ill myself. All of them recovered.

The inhabitants of St. John's were in general healthy this summer; there being but very few fever cases, which I could hear of. A short time before we sailed, a seaman was sent to the hospital very ill of fever, who applied to the Commodore for relief, as he had been sent on shore by the master of a merchant ship, to which he belonged, because he was sick. This horrid custom prevails on board of merchantmen there, which occasion the loss of many valuable

valuable lives to the public ; as probably would have been the case with this man, had not the Commodore ordered him to be entered on board the *Salisbury*, and to be sent to the hospital out of compassion.

I have readily mentioned this man, because it furnishes me with an opportunity to lament, that no provision is made by the merchants and traders, at a place of so much trade and consequence as St. John's is now become, for the many helpless objects of distress, who are often sent on shore, perhaps penniless, from their vessels with virulent infection about them ; where, I am well informed, they frequently perish for want of food, as well as for want of medical assistance.

It would in the end certainly redound to the interest of all the merchants and traders belonging to Newfoundland ; as well as be an act of great humanity for them to provide an asylum at St. John's for such objects *.

The miserable agreement between the surgeons of the place and the fishermen, for *doctoring*, as they

* I was happy that my friend Sir Erasmus Gower, whose humanity and liberality I have long been acquainted with, was appointed this year to the government and chief command of the island ; because I was thereby enabled to suggest the plan to him—who I am satisfied will use his utmost influence to promote and put in practice an institution that will be productive of great public benefit.

call it, cannot possibly entitle them to more care or medicines when they are sick, than the charitable disposition of gentlemen in narrow circumstances,—as numbers of the surgeons are there,—prompts them to bestow. Most of the seamen on board of the vessels I was informed have no agreement at all; but when taken ill are sent on shore to shift for themselves, where every thing is very dear. The consequence is, that in a short time they become beggars, if they are fortunate enough to survive their illness, for the vessels to which they belonged have by that time failed on their voyage.

On the 2d of August, a fire broke out in the woods on the south side of the harbour, on the road to Petty Harbour, which was got under, and almost put out the 8th. In some parts it continued to smoke for some time after.

The Commodore went over and staid some days with our ship's company and officers; and with the officers and troops of the garrison, to put it out. Some inhabitants also assisted on the occasion.

When we arrived the 21st of November at Spithead, after a bad passage; we had only rheumatic, scorbutic, and lame people on the sick list.

While I was ill myself, I took the bark freely with purgatives, and tinct. Thebaic. occasionally—bowel complaints being the most urgent symptom, which harassed me.

CHAPTER VIII.

Observations on Fever on board the Salisbury, in 1787.

WHEN we sailed from Spithead on the 13th of June, in company with the *Winchelsea*; we had only one fever patient on the sick list. After a very indifferent passage, in thick, foggy weather, and the wind dying away, we were so near the land as to hear the surf beating on the shore on the 14th July, and we anchored immediately. When it cleared, we found we were off the Bay of Bulls, and the next day we got safe into the harbour of St. John's. The sick were sent on shore to quarters, because the hospital was ordered to be pulled down, which was done accordingly.

On the 31st October we sailed in company with the *Rose* for England, and arrived the 20th of November at Spithead; and not a fever patient on the list. In firing the salute on our arrival, one of the gunners lost his hand, by loading a gun without having sponged it after it was fired.

In the months of January, February, March, April, and May, a number of fever cases occurred, and were managed, in my usual way, and cured on board. Unfortunately I have mislaid the Diary for that time. However, I have an account of 64 fever

patients who complained, and all recovered this year. Thirty-one of them complained in the months of June and July. Most of the young gentlemen were ill of the fever, and some of them relapsed several times. One of them, in whose case diabetes * was the most distressing symptom, was extremely bad. I was then, and am still of opinion, that they were infected by their messmate the gunner, who was very ill for a long time; from his sloth and irregular manner of living, he really appeared to be a mass of infection.

In the latter part of the summer, a number of the lower class of inhabitants died, chiefly of fever, as far as I could learn.

One of our men died at sick quarters of mortification of his bowels. Upon opening the body, I found the liver greatly inflamed and enlarged; and the right lobe of the lungs much inflamed, and adhering strongly to the pleura; besides a mortification of the small intestines near the commencement of the colon. One of the Echo's people died at sick quarters of phthisis pulmonalis. Upon examination, the lungs appeared to be only a mass of enlarged tubercles in a state of suppuration, and in many places adhering so closely to the pleura and ribs, as to be inseparable without tearing them, and the lungs — which then appeared like a broken piece of honeycomb.

* *Redundancy* of urine only, is meant here.

CHAPTER IX.

*Observations on Fever on board the Salisbury, &c. in
1788.*

BEFORE the 28th of June, when we sailed, a number complained of fever, and several of these patients were sent to the hospital. There were six on the list at this time. Three of them only were fever patients; and one was pleuritic. The first fortnight of the passage was chiefly blowing wet weather; the wet continued until the 17th of July. The latter part was very moderate and pleasant weather, and we anchored the 25th July in the narrows of St. John's harbour. On the 13th of July, one of the ship's company, who was taken ill the 3d, died of cynanche trachealis. In warping the ship to her moorings, several men were hurt at the capstan, of whom one was sent with concussion of the brain to sick quarters; and 14 sick and lame on the 30th. The 19th of August, one of the young gentlemen shot off his left hand, which was amputated above the carpus.

The fever prevailed greatly all this spring and summer amongst the lower class of inhabitants, and many died of it. I was informed that what contri-

buted greatly towards the general sickness was, a ship arriving early in the season with the fever on board; from which their sick were sent on shore amongst the inhabitants*.

An eminent surgeon of St. John's, to whom I recommended the bark treatment of fever, informed me, that it had succeeded in every case in which he had tried it. And another eminent surgeon, who had been my first assistant on board the *Salisbury* the first voyage, 1786, and settled that year at St. John's, allowed that it was superior to any other method of treatment; but at the same time honestly acknowledged, that he could not afford to administer it in common practice to his *agreement* patients.

This year we had 64 fever patients, besides myself. I not only was very ill, but had a severe relapse. Dysenteric symptoms were the most urgent in my own case. More cases occurred in March than in any other month. They all recovered under my usual method of treatment.

We had more itch patients than I ever had under my care, excepting on board of a seventy-four, in one cruise during the war.

The 27th October, we sailed from St. John's, in company with the *Nautilus*, and arrived at Spithead

* An hospital would prevent this mischief.

the 9th November, without a fever patient on the list. The ship was paid off the 28th November.

I have been so full on the treatment of fever in the former parts of this work, that I will not detain the reader any longer at present with what I have further to lay before him on the subject; but refer him to the Third Volume; which will very soon be published.

Where our men first caught the fever, or whence they brought the infection on board, is difficult to trace in the time of profound peace; because they are not impressed then and sent in crowds on board of tenders, to guard ships, or receiving ships—all of which are seminaries of infection: where they remain until they are draughted to other ships in time of war. But in time of peace they enter from the shore, chiefly after having been paid off from other ships and spent their money in little nasty pot-houses or rooms, where they contract nastiness, disease, and infection. Such places are well-known to exist at every sea port.

Besides, although fever when once formed is always more or less infectious, it may arise from various other causes—which will be hereafter mentioned.

CHAPTER X.

COMPARATIVE TABLE.

Shows the Number of Fever Patients on Board his Majesty's Ship the Salisbury, from the 8th of March 1786, to the 28th of November 1788 ; and the Proportion of Deaths.

Number of Fever Patients.	Number and Proportion of Deaths.
159 *	None.

* The contrast between the success stated in this and the Comparative Table of Chapter V. Sect. 11, is so striking, as to attract every reader's attention ; and shows mankind of what very high importance it is, to call in medical assistance at the commencement of fever ; and to administer the bark then liberally, paying regard to the effects only, and not to the quantity or number of the doses, nor to the colour of the bark.

Of the cases which occurred in January, February, March, April, and May, 1787, the diary is mislaid : 19 in all were sent to Haslar hospital, who recovered. The fever patients sent to St. John's hospital, having been under my own care as before mentioned ; no further notice need be taken of them, especially as they all recovered.

CHAPTER XI.

Brief Observations on Fever in the Royal Hospital at Greenwich, from the 1st of September 1791, to the 31st August 1804.

SECTION 1.

General View of the Subject.

BEFORE I conclude this Volume, I think it right to lay before my readers a summary statement of my observations on fever in this hospital; to close the evidence or data on which I wholly rest my opinion concerning febrile infection, which is the subject of the next volume. Because fever is neither endemic, nor confined to any season or age. And this I do the more readily as I find myself under no necessity to trench in the least upon the subject of the Fourth Volume; viz. "Observations on the Diseases incident to Seamen during their retirement in Greenwich Hospital."

It was the 1st of September 1791, before I got settled in my house, and could give full attention to
business,

business, so as to be able to commence the register of my observations, though I had been appointed to my situation on the 20th December 1790. My annual register begins therefore on the 1st September and ends the 31st August.

In the undertaking to establish the tonic, or bark treatment of fever here, I had many difficulties to encounter.—Of which prejudice in favour of old established practice was not the least.—But, fortunately, in May 1792, when we had four boys ill of fever who recovered soon under my usual method of treatment;—though one of them, by the mismanagement of his parents to whom he was suffered to go while he was yet in a convalescent state, had a violent relapse—it was acknowledged that my method of treating fever had been fairly tried.

Bark and wine as medicines; with beef-tea occasionally; and blisters applied early, as stimulants only—even in the cases of children, whose systems were supposed to be in the most inflammatory diathesis*, administered successfully,—were means never known to have been made use of here to cure fever. The method of treatment therefore afforded to those hitherto accustomed to the debilitating mode of managing fever, a degree of surprise proportioned to its novelty, and the success which attended it.

* At least more than those of adults.

SECTION II.

1791-2.—Within this year seventy-one fever patients were admitted ; of whom seven died, which is nearly one-tenth. But of the seven, two had delayed to complain until medicines could have no effect ; two were so intemperate as to counteract medicines and every attention ; and another of the patients was sixty-nine years of age. If therefore allowance is made for these five cases, the fair proportion of deaths would be only one-thirty-sixth, or nearly.

SECTION III.

1792-3.—In this year forty-eight fever patients were admitted, of whom six died ; which is one-eighth of the number. But of the six deaths, one patient was seventy-seven years of age, and intemperate ; one was seventy-six, in both of whose cases medicine could not be administered. One of the remaining four deaths, the patient was ill ten days ; one was seven days ill ; and one was ill five days before I saw them ; so that the time for recovering them was certainly lost before they complained : and the other patient's

patient's case was accompanied with pulmonic affection, which I have always had reason to consider one of the most unfavourable circumstances that accompany fever.

SECTION IV.

1793-4. — Thirty-five fever patients were admitted this year; of whom three died, which is more than one-twelfth. Of the three patients who died, one was admitted in a dying state; one was sixty-three years of age, and had been attending his wife, who was ill of fever some days before he complained; and the other patient had been ill a considerable time before he was admitted.

SECTION V.

1794-5. — We had thirty-one fever patients admitted this last year, three of whom died; which is nearly one-tenth of the number. All the three patients who died had been ill so long before they complained, that neither medicines nor the utmost care could be of real service to them.

SECTION

SECTION VI.

1795-6.—Within the year, thirty-five men were admitted for fever, of whom four died; which amounts to more than one-ninth of the number. Of the patients who died, one was in a dying state when he was admitted; one came from a ship where he had been ill some time; one was ill ten days before he complained, and the other had been bad eight days before he complained.

SECTION VII.

1796-7.—Within this year forty-five patients were admitted with fever, six of whom died, which is more than one-eighth. Of these patients who died, one was admitted in a dying state, and took no medicine; one died two days after he was admitted. This man was intemperate, and took little medicine. One was extremely intemperate and would not take any medicine; one was ill six days before he complained; and another was sixty-three years of age.

SECTION VIII.

1797-8.—Forty patients with fever were admitted this year; and all of them recovered.

SECTION

SECTION IX.

1798-9.—Seventy-four complained and were admitted this year with fever, three of whom died. One of the three who died was sixty-seven years of age; and one was sixty-five.

It is to be observed, that hardly one aged man is submissive and tractable under fever. Here aged men despair of recovering from fever, and do not take medicine as they are directed like young people. Sicknefs, particularly fever, prevailed this year for eleven months; and a greater proportion of the boys, than of the pensioners, were sufferers, though none of them died. The proportion of deaths is more than $\frac{1}{25}$.

SECTION X.

1799-800.—This year forty-six patients were admitted with fever; of whom four died. All the four were from sixty to sixty-six years of age. Besides one was dropfical; one was seven days ill when he was admitted; and I was under the necessity of giving the bark in a state of fermentation to one of the other two, as bark, in the usual forms, would not remain on his stomach. The proportion of deaths is more than $\frac{1}{12}$.

SECTION

SECTION XI.

1800-1.—We admitted this year with fever, ninety-one patients; eleven of whom died. Two of the number were admitted dying; one was seventy-six years of age; another was sixty-six; a third was sixty-five; a fourth was sixty-two; a fifth was sixty years of age; and a sixth was ill six days before he was admitted, which accounts for so many deaths; the proportion of which is near $\frac{1}{8}$ as it now stands. But if allowance is made for these *eight*, the proportion will be not $\frac{1}{30}$.

SECTION XII.

1801-2.—We had seventy-six fever patients this year; of whom four died. Of the four who died, one would not take any medicine; one was eighty-three; another was sixty-five; and the last was sixty-four years of age. The proportion of deaths however is reckoned $\frac{1}{15}$.

SECTION XIII.

1802-3.—Seventy-three patients were admitted for fever; eleven of whom died: But of the eleven,

one was seventy-six, and a doubtful case; one was sixty-six, and dying when admitted; another was sixty-three; one died of marasmus after the fever; and one case was accompanied with pulmonic affection. Several came from ships after they had been too long ill to be benefited by medicine, which, when subtracted, leave a very small number of tolerably fair cases. The proportion of deaths, as stated, is more than $\frac{1}{7}$; but truly does not exceed $\frac{1}{3\frac{1}{6}}$.

SECTION XIV.

1803-4.—The number of fever patients admitted this year was sixty-eight; of whom three died, and of which the proportion is more than $\frac{1}{23}$. One of the three was aged sixty-nine; one was fifty-eight; and the other was fifty-six. The former of the two last was too long in complaining; and the other's case was so slight in the beginning, that the time when he ought to have been cured was lost.

SECTION XV.

Remarks on the preceding Sections.

The first is, Whence so many fevers occur in this hospital?

A. We have two seminaries of infection or sources
of

of contagion both inseparable from us and unavoidable. The one is, the ships on board of which the pensioners are occasionally employed to assist in fitting; as always is the case in time of war;—and we have been in almost a constant state of warfare ever since my appointment.—On board of such ships there is no convenience nor accommodation for sick people. The Surgeons, if already appointed, have no provision as yet for sick; and sometimes the distance of the ship from the hospital, and sometimes the badness of the weather preventing them from being sent on shore, are concurring obstacles to these patients receiving the benefit of that treatment, care, and attendance here, which would effectually recover them, were they sent on shore immediately or soon after they are taken ill.

Second. That the innumerable small hovels, containing many little separate apartments, like pigeon-holes, wherein pensioners, who can afford to keep a room, as they call one of these holes, live with their wives or companions and children in Greenwich; which hovels and holes, situated in narrow lanes, are nests of filth, impure air, and very often of infection. In these it is no uncommon thing for the wife and some of the children to be ill of fever, and not a soul to attend them but the pensioner, who becomes also infected, and still continues with them so long after he is ill, that when at last his situation is discovered, and he is brought into the infirmary,

it is too late for him to profit by the benefits and comforts of the situation.

Third. The intimate companions, or friends of such of the distressed objects as I have described under the last remark, who go to visit them, also frequently become infected; but not knowing their danger, endeavour to brave their illness while they are able to keep about; and at last are too frequently brought in dying, or near it, instead of being brought to us in a state to be recovered.

Fourth. Many after they are brought into the infirmary, who, were they to conduct themselves properly, would recover, destroy themselves by intemperance: and many of the fever patients were it not for intemperance would not have been ill at all.

Fifth. The nurses frequently are infected with fever by their patients; but not one of them has died under my care, which, no doubt, is merely owing to the inestimable advantage of immediate assistance which is given to them as soon as they complain. Although, sometimes, they too are so foolish as to brave it for a considerable time after they find themselves infected, or ill.

Sixth. In all cases of fever which have been brought under my care here soon after the patients were taken ill, the bark or tonic method of treatment has succeeded perfectly in curing them*.

* I might extend this remark also to my patients out of the infirmary.

The reader therefore is not to suppose that these remarks are made by the author as an apology for unsuccessful practice in fever cases at this Hospital. But as so many proofs in confirmation of his former asseverations of the great danger which attends delaying to use every means in our power to cure fever as early as possible ; before the system becomes saturated, or debilitated by the fever. Because in all such cases there is the utmost difficulty in recovering any of them ; with every advantage of situation and care. Besides, few fever cases occur among old men that are not accompanied with cachexia or topical affection.

I could insert many more cases than I have already done, as well as arguments in support of what I have so strenuously and frequently repeated on this part of my subject, but will refer the reader for the present to the Third Volume.

CHAPTER XII.

Conclusion.

I HAVE now brought to a conclusion my observations for upwards of twenty-eight years on fever which arises from human effluvia in jails, hospitals, ships, or other confined situations. Knowing that these seminaries of contagion and infection compose one entire branch or grand source of Fever, which is to form the Third Volume, I have been the more diligent in collecting and stating them. By which means the reader, after comparing them and the observations in the First Volume, will be enabled to judge for himself, whether the inferences and deductions which the author has made in the Third Volume from both the preceding ones, be just and conclusive.

Intending therefore to enter fully into the subject in the next volume, I shall at present forbear to anticipate the numerous reflections that will then more properly arise from it.

The comparative view of the success of the different methods of managing fever exhibits a very
interesting

interesting object to mankind; and more particularly to Government. Because, though from these and other corresponding observations, the management of fever recommended in them might be adopted in other practice as for expence, yet the indigent establishment of Navy Surgeons* could never have enabled them to adopt the management. The consequence being obvious, and the subject viewed in the serious light which its importance required, became so alarming and delicate, that an individual who was only anxious to promote the benefit of the service, declined its prosecution, under the firm persuasion that in order to have it remedied, it was only needful to represent it in the strong though respectful manner which I did on various occasions †:

To the numerous observations and cases which I have stated in this and the preceding volume, I might add more of my own and of many gentlemen who, upon my recommendation, adopted the tonic or bark treatment of fever, were it not for swelling the volume.

Mr. Cairncrofs, Surgeon of the second battalion of the 73d regiment, at Gibraltar, in 1780, when I was there in the *Edgar*, obligingly favoured me with

* This was the case when the second edition of the *Observations* which compose this volume was printed in 1789: But now their situation is improved; and I hope will soon be more so.

† Particularly in my pamphlet on the indigent establishment of Navy Surgeons, 1781-2,

some observations of his, very much to the purpose, and confirming what I have said on the therapeutical part of the subject. But as it might be said of the observations of others, however valid or pertinent they are, that they did not come under my own cognizance, I decline to insert them.

For the chastness or fidelity of the observations which I have now laid before my readers, I readily appeal to the candour of such of them as have had, or may have equal opportunities to make observations; and to compare the eventual success of various methods of cure. But I do not pay more regard to opinions than is barely due to hypotheses be they delivered in language ever so splendid.

I am perfectly satisfied that every practitioner may be fully convinced of the truths which I have stated in this and the preceding volume, provided he will take proper measures to be convinced.— If he will only divest himself of prejudice, and make a conscientious trial of the bark or tonic treatment of fever, and compare the eventual success of it, with all other methods of managing fever hitherto practised and recommended, I have no doubt to which side the experimental balance will preponderate in favour of, and fully satisfy him*. But in conducting the experiment, he must consider it an invariable rule to be observed, that the bark must be given

* In the former editions the author expressed himself to the same purpose.

liberally and early in the fever—so early as in a manner to prevent the fever ; and he must be guided by the effects only, without regarding the colour, the quantity, or number of the doses.

In the preceding statement I have been more studious to be concise and distinct, than ambitious to obtain the reputation of a fine writer. Satisfied with having stated important facts, I shall think myself happy if I have done it intelligibly ; but still happier should these facts be found to contribute to the relief of mankind ; and if thereby I shall be found instrumental to Divine Providence in preserving the lives of my fellow-creatures.

END OF THE SECOND VOLUME.



